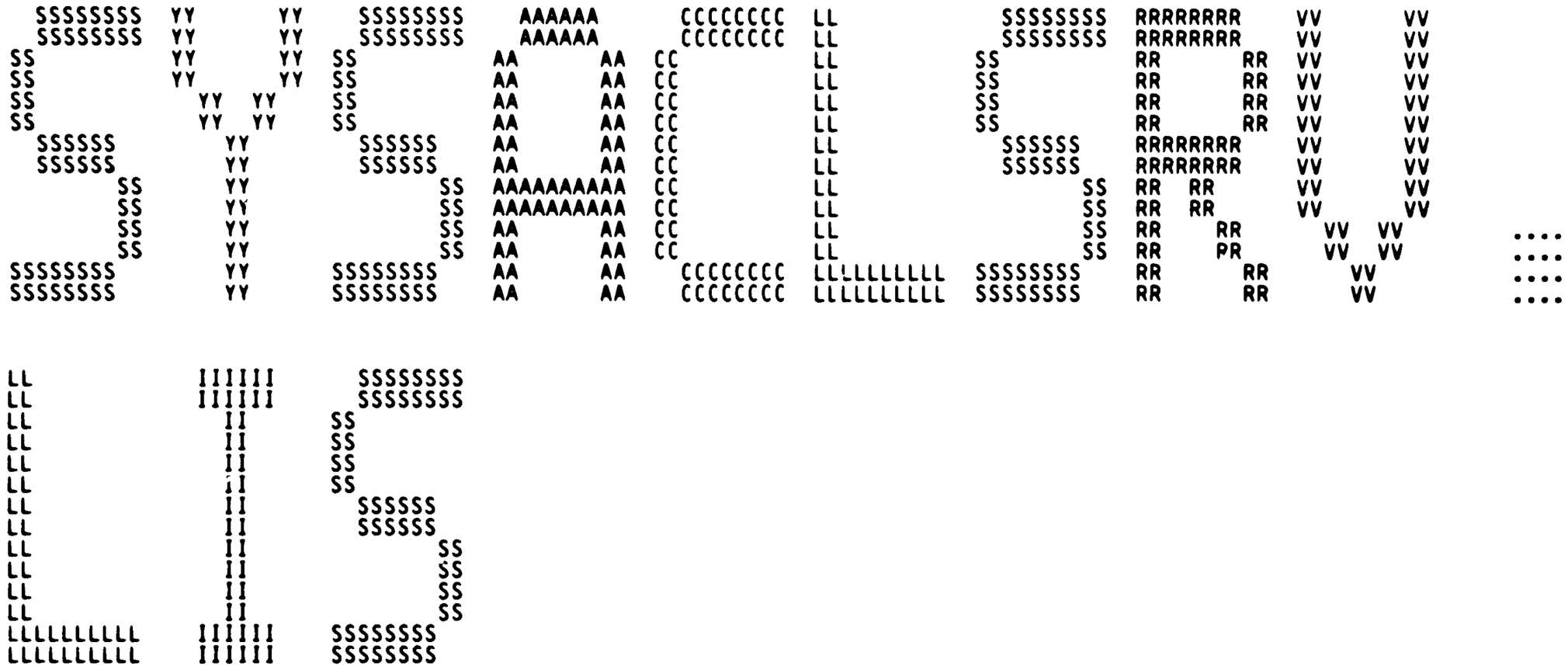
```
LLL                OOOOOOOOO          AAAAAAAAA      DDDDDDDDDDD          SSSSSSSSSSS      SSSSSSSSSSS
LLL                OOOOOOOOO          AAAAAAAAA      DDDDDDDDDDD          SSSSSSSSSSS      SSSSSSSSSSS
LLL                OOOOOOOOO          AAAAAAAAA      DDDDDDDDDDD          SSSSSSSSSSS      SSSSSSSSSSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD    SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD    SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD    SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD    SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD    SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD    SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD       SSSSSSSSS        SSSSSSSSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD       SSSSSSSSS        SSSSSSSSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD       SSSSSSSSS        SSSSSSSSS
LLL              OOO         OOO    AAAAAAAAAAAAAAA   DDD         DDD                SSS              SSS
LLL              OOO         OOO    AAAAAAAAAAAAAAA   DDD         DDD                SSS              SSS
LLL              OOO         OOO    AAAAAAAAAAAAAAA   DDD         DDD                SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD                SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD                SSS              SSS
LLL              OOO         OOO    AAA         AAA   DDD         DDD                SSS              SSS
LLLLLLLLLLLLLLL     OOOOOOOOO       AAA         AAA   DDDDDDDDDDD        SSSSSSSSSSS      SSSSSSSSSSS
LLLLLLLLLLLLLLL     OOOOOOOOO       AAA         AAA   DDDDDDDDDDD        SSSSSSSSSSS      SSSSSSSSSSS
LLLLLLLLLLLLLLL     OOOOOOOOO       AAA         AAA   DDDDDDDDDDD        SSSSSSSSSSS      SSSSSSSSSSS
```

FILEID**SYSACLSRV



```
;     1          0001  0 MODULE SYSACLSRV (
;     2          0002  0                 LANGUAGE (BLISS32),
;     3          0003  0                 IDENT = 'V04-000',
;     4          0004  0                 ADDRESSING_MODE (EXTERNAL = GENERAL,
;     5          0005  0                                  NONEXTERNAL = LONG_RELATIVE)
;     6          0006  0                 ) =
;     7          0007  1 BEGIN
;     8          0008  1
;     9          0009  1 !*****************************************************************************
;    10          0010  1 !*                                                                           *
;    11          0011  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
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;    18          0018  1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY     *
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;    21          0021  1 !*                                                                           *
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;    25          0025  1 !*                                                                           *
;    26          0026  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS     *
;    27          0027  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                   *
;    28          0028  1 !*                                                                           *
;    29          0029  1 !*                                                                           *
;    30          0030  1 !*****************************************************************************
;    31          0031  1
;    32          0032  1 !++
;    33          0033  1 !
;    34          0034  1 ! FACILITY:     Miscellaneous system services
;    35          0035  1 !
;    36          0036  1 ! ABSTRACT:
;    37          0037  1 !
;    38          0038  1 !       This module contains the routines necessary to convert an Access
;    39          0039  1 !       Control Entry from a user (text) format to an internal (binary)
;    40          0040  1 !       format and back again.
;    41          0041  1 !
;    42          0042  1 ! ENVIRONMENT:
;    43          0043  1 !
;    44          0044  1 !       VAX/VMS operating system, non-privileged system services.
;    45          0045  1 !
;    46          0046  1 !--
;    47          0047  1 !
;    48          0048  1 !
;    49          0049  1 ! AUTHOR:       L. Mark Pilant          CREATION DATE:  30-Sep-1982  11:00
;    50          0050  1 !
;    51          0051  1 ! MODIFIED BY:
;    52          0052  1 !
;    53          0053  1 !       V03-021 LMP0299         L. Mark Pilant,         8-Aug-1984  12:31
;    54          0054  1 !               Require SYSPRV to add an ACL to a device if it is unowned
;    55          0055  1 !               and there is no ACL already present on the device.
;    56          0056  1 !
;    57          0057  1 !       V03-020 LMP0275         L. Mark Pilant,         11-Jul-1984  10:11
```

```
;    58          0058  1 !
;    59          0059  1 !           If the ACL defined in the ORB is not a queue, initialize
;    60          0060  1 !           it.  (This is to optimize the path through EXE$CHKPRO_INT.)
;    61          0061  1 !
;    62          0062  1 !       V03-019 LMP0271         L. Mark Pilant,         29-Jun-1984  13:18
;    63          0063  1 !           Add support for ORB$V_NOACL.  (This is used by shared memory
;    64          0064  1 !           mailboxes to disallow ACLs.)
;    65          0065  1 !
;    66          0066  1 !       V03-018 LMP0261         L. Mark Pilant,         26-Jun-1984 11:25
;    67          0067  1 !           Fix a bug that caused the success status to be dropped from
;    68          0068  1 !           the formatted AUDIT type ACE.
;    69          0069  1 !
;    70          0070  1 !       V03-017 LMP0248         L. Mark Pilant,         3-May-1984  14:30
;    71          0071  1 !           Include the FID in the lock resource name for files, so that
;    72          0072  1 !           unique lock names will be generated.  Also, do the unlock
;    73          0073  1 !           regardless of the status if indicated by the item list.
;    74          0074  1 !
;    75          0075  1 !       V03-016 LMP0243         L. Mark Pilant,         1-May-1984  8:45
;    76          0076  1 !           Fix the dispatching so that if an error occurs, processing
;    77          0077  1 !           of the item list is not aborted.  However, only items that
;    78          0078  1 !           do not alter the ACL are processed.
;    79          0079  1 !
;    80          0080  1 !       V03-015 ACG0417         Andrew C. Goldstein,    18-Apr-1984  11:50
;    81          0081  1 !           Fix probing and lock access mode problems
;    82          0082  1 !
;    83          0083  1 !       V03-014 ACG0415         Andrew C. Goldstein,    30-Mar-1984  17:49
;    84          0084  1 !           Add ACL mutex handling to CHANGE_ACL; add options parsing
;    85          0085  1 !           to default protection ACE; break out ACL processing
;    86          0086  1 !           subroutines into separate common module; mask success
;    87          0087  1 !           and fail flags in audit display; remove IOSB parameter
;    88          0088  1 !           in $CHANGE_ACL; defer unlocking of file ACL until end
;    89          0089  1 !           of operation; find UCB ACL listhead in ORB instead of UCB.
;    90          0090  1 !
;    91          0091  1 !       V03-013 LMP0222         L. Mark Pilant,         27-Mar-1984  14:22
;    92          0092  1 !           Change the tie off symbols, necessary because of linking
;    93          0093  1 !           with XQP module ALLOCB, from locations to offsets.
;    94          0094  1 !
;    95          0095  1 !       V03-012 LMP0213         L. Mark Pilant,         13-Mar-1984  9:53
;    96          0096  1 !           Add support for exclusively locking and unlocking the
;    97          0097  1 !           object for ACL modifications.
;    98          0098  1 !
;    99          0099  1 !       V03-011 LMP0185         L. Mark Pilant,         2-Feb-1984  16:25
;   100          0100  1 !           Add support for device ACLs.  Also, improve the error
;   101          0101  1 !           handling considerably through judicious use of PROBing.
;   102          0102  1 !
;   103          0103  1 !       V03-010 LMP0179         L. Mark Pilant,         8-Dec-1983  15:46
;   104          0104  1 !           Add a new routine SYS$CHANGE_ACL, for changing the ACL
;   105          0105  1 !           associated with an object.
;   106          0106  1 !
;   107          0107  1 !       V03-009 LMP0174         L. Mark Pilant,         2-Dec-1983  9:58
;   108          0108  1 !           Add support for RMS journal-ID ACEs.
;   109          0109  1 !
;   110          0110  1 !       V03-008 LMP0170         L. Mark Pilant,         1-Dec-1983  16:43
;   111          0111  1 !           Add support for the NOPROPAGATE flag.
;   112          0112  1 !
;   113          0113  1 !       V03-007 LMP0152         L. Mark Pilant,         12-Sep-1983  15:13
;   114          0114  1 !           Make SECURITY the journal name for AUDIT and ALARM ACEs.
```

```
;  115          0115  1 !        V03-006 LMP0140         L. Mark Pilant,         23-Aug-1983  20:21
;  116          0116  1 !                Add support for alphanumeric UICs.
;  117          0117  1 !
;  118          0118  1 !        V03-005 LMP0135         L. Mark Pilant,         8-Aug-1983  11:03
;  119          0119  1 !                Change the parsing and formatting of directory default
;  120          0120  1 !                ACEs slightly.
;  121          0121  1 !
;  122          0122  1 !        V03-004 LMP0123         L. Mark Pilant,         22-Jun-1983  10:36
;  123          0123  1 !                Change the name of the FLAGS field to OPTIONS.
;  124          0124  1 !
;  125          0125  1 !        V03-003 LMP0122         L. Mark Pilant,         20-Jun-1983  9:14
;  126          0126  1 !                Add support for a directory default protection ACE.
;  127          0127  1 !
;  128          0128  1 !        V03-002 LMP0114         L. Mark Pilant,         11-May-1983  10:42
;  129          0129  1 !                Add support for an access bitmask name table.
;  130          0130  1 !
;  131          0131  1 !        V03-001 LMP0103         L. Mark Pilant,         24-Apr-1983  19:14
;  132          0132  1 !                Add support for HIDDEN and PROTECTED ACEs.
;  133          0133  1 !
;  134          0134  1 !**
;  135          0135  1
;  136          0136  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;  137          0137  1 LIBRARY 'SYS$LIBRARY:TPAMAC.L32';
```

```
;  139     0138  1 ! Declare necessary builtin functions.
;  140     0139  1
;  141     0140  1 BUILTIN
;  142     0141  1         TESTBITSC,
;  143     0142  1         INSQUE,
;  144     0143  1         MOVPSL,
;  145     0144  1         MTPR,
;  146     0145  1         PROBER,
;  147     0146  1         PROBEW,
;  148     0147  1         REMQUE;
;  149     0148  1
;  150     0149  1 LINKAGE
;  151     0150  1         L_PROBE         = JSB (REGISTER = 3, REGISTER = 1, REGISTER = 0)
;  152     0151  1                         : NOPRESERVE (2)
;  153     0152  1                           NOTUSED (4, 5, 6, 7, 8, 9, 10, 11),
;  154     0153  1
;  155     0154  1         L_VERIFY        = JSB (REGISTER = 0; REGISTER = 1)
;  156     0155  1                         : NOPRESERVE (2, 3)
;  157     0156  1                           NOTUSED (4, 5, 6, 7, 8, 9, 10, 11),
;  158     0157  1
;  159     0158  1         L_MUTEX         = JSB (REGISTER = 0, REGISTER = 4)
;  160     0159  1                         : NOTUSED (5, 6, 7, 8, 9, 10, 11);
;  161     0160  1
;  162     0161  1 FORWARD ROUTINE
;  163     0162  1         SYS$PARSE_ACL,                          ! Convert ACE to binary
;  164     0163  1         SYS$FORMAT_ACL,                         ! Convert ACE to text
;  165     0164  1         SYS$CHANGE_ACL,                         ! Change an object's ACL
;  166     0165  1         GET_PARENT_LOCK,                        ! Take out parent for ACL locks
;  167     0166  1
;  168     0167  1 ! TPARSE action routine
;  169     0168  1
;  170     0169  1         SET_ID,                                 ! Save a converted identifier
;  171     0170  1         SET_ACCESS_BIT,                         ! Set desired access bit by name
;  172     0171  1
;  173     0172  1 ! ACL queue head locating routines.
;  174     0173  1
;  175     0174  1         GET_UCB_ACL,                            ! For UCBs
;  176     0175  1         GET_JBC_ACL,                            ! For Job controller queue
;  177     0176  1         GET_CEB_ACL,                            ! For CEBs
;  178     0177  1         GET_LNT_ACL,                            ! For logical name tables
;  179     0178  1         GET_PCB_ACL,                            ! For processes
;  180     0179  1         GET_GBL_ACL,                            ! For global sections
;  181     0180  1
;  182     0181  1 ! ACL action routines.
;  183     0182  1
;  184     0183  1         ACL_DISPATCH,                           ! Main ACL function dispatcher
;  185     0184  1         RUNDOWN_CHANGE_ACL;                     ! Clean up $CHANGE_ACL context
;  186     0185  1
;  187     0186  1 EXTERNAL ROUTINE
;  188     0187  1         ACL_ADDENTRY,                           ! Add an ACE
;  189     0188  1         ACL_DELENTRY,                           ! Delete an ACE
;  190     0189  1         ACL_MODENTRY,                           ! Modify an ACE
;  191     0190  1         ACL_FINDENTRY,                          ! Locate a specific ACE
;  192     0191  1         ACL_FINDTYPE,                           ! Locate a specific ACE type
;  193     0192  1         ACL_DELETEACL,                          ! Delete the entire ACL
;  194     0193  1         ACL_READACL,                            ! Read the ACL
;  195     0194  1         ACL_ACLLENGTH,                          ! Get the ACL's length
```

```
;  196          0195  1          ACL_READACE,                            ! Read a single ACE
;  197          0196  1          ACL_LOCATEACE,                          ! Locate ACE by context
;  198          0197  1          ACL_INIT_QUEUE,                         ! Initialize the ACL queue
;  199          0198  1          ALLOC_PAGED,                            ! Paged pool allocator
;  200          0199  1          DALLOC_PAGED,                           ! Paged pool deallocator
;  201          0200  1          LIB$TPARSE,                             ! General purpose parser
;  202          0201  1          LIB$FID_TO_NAME,                        ! FID to file-spec translator
;  203          0202  1          LIB$GET_VM,                             ! General memory allocater
;  204          0203  1          LIB$FREE_VM,                            ! General memory deallocater
;  205          0204  1          EXE$PROBER      : L_PROBE ADDRESSING_MODE (GENERAL),
;  206          0205  1                                                  ! Probe buffer for read
;  207          0206  1          EXE$PROBEW      : L_PROBE ADDRESSING_MODE (GENERAL),
;  208          0207  1                                                  ! Probe buffer for write
;  209          0208  1          IOC$VERIFYCHAN  : L_VERIFY ADDRESSING_MODE (GENERAL),
;  210          0209  1                                                  ! Verify channel number
;  211          0210  1          SCH$LOCKR       : L_MUTEX ADDRESSING_MODE (GENERAL),
;  212          0211  1                                                  ! Lock mutex for read
;  213          0212  1          SCH$LOCKW       : L_MUTEX ADDRESSING_MODE (GENERAL),
;  214          0213  1                                                  ! Lock mutex for write
;  215          0214  1          SCH$UNLOCK      : L_MUTEX ADDRESSING_MODE (GENERAL);
;  216          0215  1                                                  ! Unlock mutex
;  217          0216  1
;  218          0217  1  EXTERNAL
;  219          0218  1          CTL$GL_PCB      : REF $BBLOCK;          ! Address of process PCB
;  220          0219  1
;  221          0220  1  MACRO
;  222        M 0221  1          ARG_COUNT =
;  223        M 0222  1                  BEGIN
;  224        M 0223  1                  BUILTIN AP;
;  225        M 0224  1                  .(.AP)<0,8>
;  226        M 0225  1                  END
;  227          0226  1                  %,
;  228          0227  1
;  229        M 0228  1          SET_IPL (LEVEL) =
;  230        M 0229  1                  BEGIN
;  231        M 0230  1                  BUILTIN MTPR;
;  232        M 0231  1                  MTPR (%REF (LEVEL), PR$_IPL)
;  233        M 0232  1                  END
;  234          0233  1                  %;
;  235          0234  1
;  236          0235  1  LITERAL
;  237          0236  1          ACL_TYPE        = 7,                    ! Must parallel [F11X.SRC]FCPDEF.B32
;  238          0237  1          MAX_ACL_SIZE    = 512;                  ! Max size of an ACL segment
;  239          0238  1
;  240          0239  1  LITERAL
;  241          0240  1          MIN_OBJECT_TYPE = MINU (ACL$C_FILE,
;  242          0241  1                                  ACL$C_DEVICE,
;  243          0242  1                                  ACL$C_JOBCTL_QUEUE,
;  244          0243  1                                  ACL$C_COMMON_EF_CLUSTER,
;  245          0244  1                                  ACL$C_LOGICAL_NAME_TABLE,
;  246          0245  1                                  ACL$C_PROCESS,
;  247          0246  1                                  ACL$C_GLOBAL_SECTION),
;  248          0247  1
;  249          0248  1          MAX_OBJECT_TYPE = MAXU (ACL$C_FILE,
;  250          0249  1                                  ACL$C_DEVICE,
;  251          0250  1                                  ACL$C_JOBCTL_QUEUE,
;  252          0251  1                                  ACL$C_COMMON_EF_CLUSTER,
```

```
;  253          0252  1                                   ACL$C_LOGICAL_NAME_TABLE,
;  254          0253  1                                   ACL$C_PROCESS,
;  255          0254  1                                   ACL$C_GLOBAL_SECTION),
;  256          0255  1
;  257          0256  1          MIN_ACL_ATR      = MINU (ACL$C_ADDACLENT,
;  258          0257  1                                  ACL$C_DELACLENT,
;  259          0258  1                                  ACL$C_MODACLENT,
;  260          0259  1                                  ACL$C_FNDACLENT,
;  261          0260  1                                  ACL$C_FNDACETYP,
;  262          0261  1                                  ACL$C_DELETEACL,
;  263          0262  1                                  ACL$C_READACL,
;  264          0263  1                                  ACL$C_ACLLENGTH,
;  265          0264  1                                  ACL$C_READACE,
;  266          0265  1                                  ACL$C_RLOCK_ACL,
;  267          0266  1                                  ACL$C_WLOCK_ACL,
;  268          0267  1                                  ACL$C_UNLOCK_ACL),
;  269          0268  1
;  270          0269  1          MAX_ACL_ATR      = MAXU (ACL$C_ADDACLENT,
;  271          0270  1                                  ACL$C_DELACLENT,
;  272          0271  1                                  ACL$C_MODACLENT,
;  273          0272  1                                  ACL$C_FNDACLENT,
;  274          0273  1                                  ACL$C_FNDACETYP,
;  275          0274  1                                  ACL$C_DELETEACL,
;  276          0275  1                                  ACL$C_READACL,
;  277          0276  1                                  ACL$C_ACLLENGTH,
;  278          0277  1                                  ACL$C_READACE,
;  279          0278  1                                  ACL$C_RLOCK_ACL,
;  280          0279  1                                  ACL$C_WLOCK_ACL,
;  281          0280  1                                  ACL$C_UNLOCK_ACL);
;  282          0281  1
;  283          0282  1  OWN
;  284          0283  1          JOURNAL_ACES     : BYTE INITIAL (0),     ! Journaling ACEs allowed
;  285          0284  1                                                   ! 0 = no support
;  286          0285  1                                                   ! 1 = support in
;  287          0286  1          ACE_BUFFER       : $BBLOCK [ATR$S_READACL],      ! Storage for binary ACE
;  288          0287  1          ACE_INDEX,                                ! Index into ACE key area
;  289          0288  1          ACE_TYPE,                                 ! ACE type code
;  290          0289  1          ACE_RIGHTS,                               ! ACE access rights
;  291          0290  1          UIC_FLAGS,                                ! UIC conversion flags
;  292          0291  1          UIC_COUNT,                                ! Number of UIC id's entered
;  293          0292  1          IDENTIFIER       : $BBLOCK [4],           ! Converted identifier
;  294          0293  1          ID_NAME          : $BBLOCK [DSC$C_S_BLN],        ! ID name descriptor
;  295          0294  1          ID_COUNT,                                 ! Number of identifiers given
;  296          0295  1          JOURNAL_NAME     : $BBLOCK [DSC$C_S_BLN],        ! Journal name descr
;  297          0296  1          ACCESS_FLAGS,                             ! Audit access flags
;  298          0297  1          SYSTEM_PROT      : $BBLOCK [4],           ! System protection default
;  299          0298  1          OWNER_PROT       : $BBLOCK [4],           ! Owner protection default
;  300          0299  1          GROUP_PROT       : $BBLOCK [4],           ! Group protection default
;  301          0300  1          WORLD_PROT       : $BBLOCK [4],           ! World protection default
;  302          0301  1          BIT_NAME_TABLE   : REF BLOCKVECTOR [,DSC$C_S_BLN,BYTE],  ! Access bit name table addr
;  303          0302  1          CHANGE_ACMODE,                            ! Access mode for $CHANGE_ACL
;  304          0303  1          CALL_ACMODE,                              ! Access mode of caller
;  305          0304  1          PARENT_ID,                                ! Parent ID for ACL locks
;  306          0305  1          ACL_QUEUE_HEAD   : REF $BBLOCK,           ! Address of the ACL queue head
;  307          0306  1          ACL_POINTER      : REF $BBLOCK,           ! Address of current segment
;  308          0307  1          ACL_SPLIT,                                ! Offset to ACE in segment
;  309          0308  1          ACE_POINTER      : REF $BBLOCK,           ! Address of current ACE
```

```
;  310     0309  1          ACE_NUMBER,                             ! Numeric position of ACE in ACL
;  311     0310  1          ACL_AREA        : $BBLOCK [MAX_ACL_SIZE],       ! Temp storage for ACL segment
;  312     0311  1          ACL_CONTEXT,                            ! Context used in $CHANGE_ACL
;  313     0312  1          LOCK_RESNAM     : $BBLOCK [DSC$C_S_BLN],        ! Lock resouce name desc
;  314     0313  1          RESNAM_TEXT     : $BBLOCK [31];         ! Actual resource name
;  315     0314  1
;  316     0315  1  ! Macro defining the subfields used within the resource name field.
;  317     0316  1
;  318     0317  1  MACRO
;  319     0318  1          RSN_T_PREFIX    =  0,  0,  0,  0 %,     ! Lock name prefix
;  320     0319  1          RSN_T_DEVNAM    =  8,  0,  0,  0 %,     ! Device name for device and
;  321     0320  1                                                   !  file type objects
;  322     0321  1          RSN_L_FID       = 24,  0, 32,  0 %,     ! File-id for lock
;  323     0322  1          RSN_W_FID_NUM   = 24,  0, 16,  0 %,     ! File number
;  324     0323  1          RSN_W_FID_SEQ   = 26,  0, 16,  0 %;     ! File sequence number
;  325     0324  1
;  326     0325  1  LITERAL
;  327     0326  1          RSN_S_PREFIX    = 8,                    ! Size of lock name prefix
;  328     0327  1          RSN_S_DEVNAM    = 16;                   ! Size of device name
;  329     0328  1
;  330     0329  1  ! Assumptions made about various fields used.
;  331     0330  1
;  332     0331  1  ! The following assumptions should track the definitions in
;  333     0332  1  !       [RMS.SRC]RMSFILSTR.SDL module RJRDEF and
;  334     0333  1  !       [VMSLIB.SRC]STARDEFAE.SDL module ACEDEF
;  335     0334  1
;  336     0335  1  $ASSUME (RJR$S_JNLID EQL 28);
;  337     0336  1  $ASSUME ($BYTEOFFSET (RJR$T_VOLNAM) EQL 8);
;  338     0337  1  $ASSUME ($BYTEOFFSET (RJR$T_FID) EQL 20);
;  339     0338  1  $ASSUME ($BYTEOFFSET (RJR$Q_ID_DATE) EQL 28);
;  340     0339  1
;  341     0340  1  ! Define the default bit names.
;  342     0341  1
;  343     0342  1  BIND
;  344     0343  1          DEFAULT_BITS    = UPLIT (
;  345     03    1                                   $DESCRIPTOR ('READ'),
;  346     0345  1                                   $DESCRIPTOR ('WRITE'),
;  347     0346  1                                   $DESCRIPTOR ('EXECUTE'),
;  348     0347  1                                   $DESCRIPTOR ('DELETE'),
;  349     0348  1                                   $DESCRIPTOR ('CONTROL'),
;  350     0349  1                                   $DESCRIPTOR ('BIT_5'),
;  351     0350  1                                   $DESCRIPTOR ('BIT_6'),
;  352     0351  1                                   $DESCRIPTOR ('BIT_7'),
;  353     0352  1                                   $DESCRIPTOR ('BIT_8'),
;  354     0353  1                                   $DESCRIPTOR ('BIT_9'),
;  355     0354  1                                   $DESCRIPTOR ('BIT_10'),
;  356     0355  1                                   $DESCRIPTOR ('BIT_11'),
;  357     0356  1                                   $DESCRIPTOR ('BIT_12'),
;  358     0357  1                                   $DESCRIPTOR ('BIT_13'),
;  359     0358  1                                   $DESCRIPTOR ('BIT_14'),
;  360     0359  1                                   $DESCRIPTOR ('BIT_15'),
;  361     0360  1                                   $DESCRIPTOR ('BIT_16'),
;  362     0361  1                                   $DESCRIPTOR ('BIT_17'),
;  363     0362  1                                   $DESCRIPTOR ('BIT_18'),
;  364     0363  1                                   $DESCRIPTOR ('BIT_19'),
;  365     0364  1                                   $DESCRIPTOR ('BIT_20'),
;  366     0365  1                                   $DESCRIPTOR ('BIT_21'),
```

```
;  367          0366  1                                  $DESCRIPTOR ('BIT_22'),
;  368          0367  1                                  $DESCRIPTOR ('BIT_23'),
;  369          0368  1                                  $DESCRIPTOR ('BIT_24'),
;  370          0369  1                                  $DESCRIPTOR ('BIT_25'),
;  371          0370  1                                  $DESCRIPTOR ('BIT_26'),
;  372          0371  1                                  $DESCRIPTOR ('BIT_27'),
;  373          0372  1                                  $DESCRIPTOR ('BIT_28'),
;  374          0373  1                                  $DESCRIPTOR ('BIT_29'),
;  375          0374  1                                  $DESCRIPTOR ('BIT_30'),
;  376          0375  1                                  $DESCRIPTOR ('BIT_31')
;  377          0376  1                                  ) : VECTOR,
;  378          0377  1
;  379          0378  1          LOCK_PREFIX      = UPLIT (
;  380          0379  1                                  $DESCRIPTOR ('ACL$LOCK'),
;  381          0380  1                                  $DESCRIPTOR ('ACL$FIL_'),
;  382          0381  1                                  $DESCRIPTOR ('ACL$DEV_'),
;  383          0382  1                                  $DESCRIPTOR ('ACL$JBC_'),
;  384          0383  1                                  $DESCRIPTOR ('ACL$CEF_'),
;  385          0384  1                                  $DESCRIPTOR ('ACL$LNT_'),
;  386          0385  1                                  $DESCRIPTOR ('ACL$PRC_'),
;  387          0386  1                                  $DESCRIPTOR ('ACL$GBL_')
;  388          0387  1                                  ) : VECTOR;
```

```
;  390          0388  1 %SBTTL  'TPARSE tables for $PARSE_ACL'
;  391          0389  1 ! TPARSE tables to parse an Access Control List (ACL) entry.
;  392          0390  1
;  393          0391  1 $INIT_STATE     (ACE_STATE, ACE_KEY);
;  394          0392  1
;  395          0393  1 ! Determine the type of ACE
;  396          0394  1
;  397        P 0395  1 $STATE  (,
;  398        P 0396  1          ('(')
;  399          0397  1          );
;  400          0398  1
;  401        P 0399  1 $STATE  (GET_KEYWORD,
;  402        P 0400  1          ('IDENTIFIER',GET_ID,,ACE$C_KEYID,ACE_TYPE),
;  403        P 0401  1          ('BI_JOURNAL_NAME',GET_JNL,,ACE$C_BIJNL,ACE_TYPE),
;  404        P 0402  1          ('AI_JOURNAL_NAME',GET_JNL,,ACE$C_AIJNL,ACE_TYPE),
;  405        P 0403  1          ('AT_JOURNAL_NAME',GET_JNL,,ACE$C_ATJNL,ACE_TYPE),
;  406        P 0404  1          ('AUDIT_JOURNAL',GET_AUDIT,,ACE$C_AUDIT,ACE_TYPE),
;  407        P 0405  1          ('ALARM_JOURNAL',GET_ALARM,,ACE$C_ALARM,ACE_TYPE),
;  408        P 0406  1          ('ACCESS',GET_ACCESS),
;  409        P 0407  1          ('OPTIONS',GET_FLAGS),
;  410        P 0408  1          ('DEFAULT_PROTECTION',GET_PROT,,ACE$C_DIRDEF,ACE_TYPE)
;  411          0409  1          );
;  412        P 0410  1 $STATE  (,
;  413        P 0411  1          (',',GET_KEYWORD),
;  414        P 0412  1          (')',CHK_FOR_END)
;  415          0413  1          );
;  416          0414  1
;  417          0415  1 ! Access Control Entry.
;  418          0416  1
;  419        P 0417  1 $STATE  (GET_ID,
;  420        P 0418  1          ('='),
;  421        P 0419  1          (':')
;  422          0420  1          );
;  423        P 0421  1 $STATE  (GET_IDTYPE,
;  424        P 0422  1          (TPA$_IDENT,,,IDENTIFIER)
;  425          0423  1          );
;  426          0424  1
;  427          0425  1 ! Check for the end of the identifier.
;  428          0426  1
;  429        P 0427  1 $STATE  (CHK_ENDID,
;  430        P 0428  1          (',',GET_KEYWORD,SET_ID),
;  431        P 0429  1          ('+',GET_IDTYPE,SET_ID),
;  432        P 0430  1          (')',CHK_FOR_END,SET_ID)
;  433          0431  1          );
;  434          0432  1
;  435          0433  1 ! RMS Journal name
;  436          0434  1
;  437        P 0435  1 $STATE  (GET_JNL,
;  438        P 0436  1          ('='),
;  439        P 0437  1          (':')
;  440          0438  1          );
;  441        P 0439  1 $STATE  (,
;  442        P 0440  1          ((GET_STRING),,,,JOURNAL_NAME)
;  443          0441  1          );
;  444          0442  1
;  445          0443  1 ! Check for the end of the journal name.
;  446          0444  1
```

```
;  447        P 0445  1 $STATE  (,
;  448        P 0446  1          (')',CHK_FOR_END)
;  449          0447  1          );
;  450          0448  1
;  451          0449  1 ! File access audit.
;  452          0450  1
;  453        P 0451  1 $STATE  (GET_AUDIT,
;  454        P 0452  1          ('='),
;  455        P 0453  1          (':')
;  456          0454  1          );
;  457        P 0455  1 $STATE  (,
;  458        P 0456  1          ((GET_STRING),,,,JOURNAL_NAME)
;  459          0457  1          );
;  460          0458  1
;  461          0459  1 ! Check to see if there is an access type to follow
;  462          0460  1
;  463        P 0461  1 $STATE  (,
;  464        P 0462  1          (',',GET_KEYWORD),
;  465        P 0463  1          (')',CHK_FOR_END)
;  466          0464  1          );
;  467          0465  1
;  468          0466  1 ! File access alarm
;  469          0467  1
;  470        P 0468  1 $STATE  (GET_ALARM,
;  471        P 0469  1          ('='),
;  472        P 0470  1          (':')
;  473          0471  1          );
;  474        P 0472  1 $STATE  (,
;  475        P 0473  1          ((GET_STRING),,,,JOURNAL_NAME)
;  476          0474  1          );
;  477          0475  1
;  478          0476  1 ! Check to see if there is an access type to follow
;  479          0477  1
;  480        P 0478  1 $STATE  (,
;  481        P 0479  1          (',',GET_KEYWORD),
;  482        P 0480  1          (')',CHK_FOR_END)
;  483          0481  1          );
;  484          0482  1
;  485          0483  1 ! Get the access type code
;  486          0484  1
;  487        P 0485  1 $STATE  (GET_ACCESS,
;  488        P 0486  1          ('='),
;  489        P 0487  1          (':')
;  490          0488  1          );
;  491        P 0489  1 $STATE  (GET_ACCTYPE,
;  492        P 0490  1          ('SUCCESS',,,ACE$M_SUCCESS,ACCESS_FLAGS),
;  493        P 0491  1          ('FAILURE',,,ACE$M_FAILURE,ACCESS_FLAGS),
;  494        P 0492  1          ('NONE'),
;  495        P 0493  1          ((GET_STRING),,SET_ACCESS_BIT)
;  496          0494  1          );
;  497        P 0495  1 $STATE  (,
;  498        P 0496  1          ('+',GET_ACCTYPE),
;  499        P 0497  1          (')',CHK_FOR_END),
;  500        P 0498  1          (',',GET_KEYWORD)
;  501          0499  1          );
;  502          0500  1
;  503          0501  1 ! Get any special flags applied to the ACE.
```

```
;  504          0502  1
;  505        P 0503  1 $STATE  (GET_FLAGS,
;  506        P 0504  1          ('='),
;  507        P 0505  1          (':')
;  508          0506  1          );
;  509        P 0507  1 $STATE  (GET_FLAGTYPE,
;  510        P 0508  1          ('DEFAULT',,ACE$M_DEFAULT,ACE_BUFFER[ACE$W_FLAGS]),
;  511        P 0509  1          ('HIDDEN',,ACE$M_HIDDEN,ACE_BUFFER[ACE$W_FLAGS]),
;  512        P 0510  1          ('PROTECTED',,ACE$M_PROTECTED,ACE_BUFFER[ACE$W_FLAGS]),
;  513        P 0511  1          ('NOPROPAGATE',,ACE$M_NOPROPAGATE,ACE_BUFFER[ACE$W_FLAGS]),
;  514        P 0512  1          ('NONE')
;  515          0513  1          );
;  516        P 0514  1 $STATE  (
;  517        P 0515  1          ('+',GET_FLAGTYPE),
;  518        P 0516  1          (')',CHK_FOR_END),
;  519        P 0517  1          (',',GET_KEYWORD)
;  520          0518  1          );
;  521          0519  1
;  522          0520  1 ! Get the directory default protection.
;  523          0521  1
;  524        P 0522  1 $STATE  (GET_PROT,
;  525        P 0523  1          (',')
;  526          0524  1          );
;  527        P 0525  1 $STATE  (GET_PROT_CLASS,
;  528        P 0526  1          ('SYSTEM',GET_SYS_PRO),
;  529        P 0527  1          ('OWNER',GET_OWN_PRO),
;  530        P 0528  1          ('GROUP',GET_GRP_PRO),
;  531        P 0529  1          ('WORLD',GET_WOR_PRO),
;  532        P 0530  1          (TPA$_LAMBDA,GET_KEYWORD)
;  533          0531  1          );
;  534        P 0532  1 $STATE  (GET_SYS_PRO,
;  535        P 0533  1          (':'),
;  536        P 0534  1          ('='),
;  537        P 0535  1          (TPA$_LAMBDA,CHK_END_PRO)
;  538          0536  1          );
;  539        P 0537  1 $STATE  (GET_SYS_PRO1,
;  540        P 0538  1          ('R',GET_SYS_PRO1,,ARM$M_READ,SYSTEM_PROT),
;  541        P 0539  1          ('W',GET_SYS_PRO1,,ARM$M_WRITE,SYSTEM_PROT),
;  542        P 0540  1          ('E',GET_SYS_PRO1,,ARM$M_EXECUTE,SYSTEM_PROT),
;  543        P 0541  1          ('D',GET_SYS_PRO1,,ARM$M_DELETE,SYSTEM_PROT),
;  544        P 0542  1          ('C',GET_SYS_PRO1,,ARM$M_CONTROL,SYSTEM_PROT),
;  545        P 0543  1          (TPA$_LAMBDA,CHK_END_PRO)
;  546          0544  1          );
;  547        P 0545  1 $STATE  (GET_OWN_PRO,
;  548        P 0546  1          (':'),
;  549        P 0547  1          ('='),
;  550        P 0548  1          (TPA$_LAMBDA,CHK_END_PRO)
;  551          0549  1          );
;  552        P 0550  1 $STATE  (GET_OWN_PRO1,
;  553        P 0551  1          ('R',GET_OWN_PRO1,,ARM$M_READ,OWNER_PROT),
;  554        P 0552  1          ('W',GET_OWN_PRO1,,ARM$M_WRITE,OWNER_PROT),
;  555        P 0553  1          ('E',GET_OWN_PRO1,,ARM$M_EXECUTE,OWNER_PROT),
;  556        P 0554  1          ('D',GET_OWN_PRO1,,ARM$M_DELETE,OWNER_PROT),
;  557        P 0555  1          ('C',GET_OWN_PRO1,,ARM$M_CONTROL,OWNER_PROT),
;  558        P 0556  1          (TPA$_LAMBDA,CHK_END_PRO)
;  559          0557  1          );
;  560        P 0558  1 $STATE  (GET_GRP_PRO,
```

```
;  561        P 0559  1          (':'),
;  562        P 0560  1          ('='),
;  563        P 0561  1          (TPA$_LAMBDA,CHK_END_PRO)
;  564          0562  1          );
;  565        P 0563  1 $STATE   (GET_GRP_PRO1,
;  566        P 0564  1          ('R',GET_GRP_PRO1,,ARM$M_READ,GROUP_PROT),
;  567        P 0565  1          ('W',GET_GRP_PRO1,,ARM$M_WRITE,GROUP_PROT),
;  568        P 0566  1          ('E',GET_GRP_PRO1,,ARM$M_EXECUTE,GROUP_PROT),
;  569        P 0567  1          ('D',GET_GRP_PRO1,,ARM$M_DELETE,GROUP_PROT),
;  570        P 0568  1          ('C',GET_GRP_PRO1,,ARM$M_CONTROL,GROUP_PROT),
;  571        P 0569  1          (TPA$_LAMBDA,CHK_END_PRO)
;  572          0570  1          );
;  573        P 0571  1 $STATE   (GET_WOR_PRO,
;  574        P 0572  1          (':'),
;  575        P 0573  1          ('='),
;  576        P 0574  1          (TPA$_LAMBDA,CHK_END_PRO)
;  577          0575  1          );
;  578        P 0576  1 $STATE   (GET_WOR_PRO1,
;  579        P 0577  1          ('R',GET_WOR_PRO1,,ARM$M_READ,WORLD_PROT),
;  580        P 0578  1          ('W',GET_WOR_PRO1,,ARM$M_WRITE,WORLD_PROT),
;  581        P 0579  1          ('E',GET_WOR_PRO1,,ARM$M_EXECUTE,WORLD_PROT),
;  582        P 0580  1          ('D',GET_WOR_PRO1,,ARM$M_DELETE,WORLD_PROT),
;  583        P 0581  1          ('C',GET_WOR_PRO1,,ARM$M_CONTROL,WORLD_PROT),
;  584        P 0582  1          (TPA$_LAMBDA,CHK_END_PRO)
;  585          0583  1          );
;  586          0584  1
;  587        P 0585  1 $STATE   (CHK_END_PRO,
;  588        P 0586  1          (',',GET_PROT_CLASS),
;  589        P 0587  1          (')',CHK_FOR_END)
;  590          0588  1          );
;  591          0589  1
;  592          0590  1 ! Parse off a random string.
;  593          0591  1
;  594        P 0592  1 $STATE   (GET_STRING,
;  595        P 0593  1          (',',TPA$_FAIL),
;  596        P 0594  1          (')',TPA$_FAIL),
;  597        P 0595  1          (TPA$_EOS,TPA$_FAIL),
;  598        P 0596  1          ((GET_STRING1))
;  599          0597  1          );
;  600        P 0598  1 $STATE   (GET_STRING1,
;  601        P 0599  1          ((CHR_DELIM),GET_STRING1),
;  602        P 0600  1          (TPA$_LAMBDA,TPA$_EXIT)
;  603          0601  1          );
;  604        P 0602  1 $STATE   (CHK_DELIM,
;  605        P 0603  1          ('+',TPA$_FAIL),
;  606        P 0604  1          (',',TPA$_FAIL),
;  607        P 0605  1          (')',TPA$_FAIL),
;  608        P 0606  1          (TPA$_EOS,TPA$_FAIL),
;  609        P 0607  1          (TPA$_ANY,TPA$_EXIT)
;  610          0608  1          );
;  611          0609  1
;  612          0610  1 ! Check for the end of the ACE.  Trailing blanks are allowed.
;  613          0611  1
;  614        P 0612  1 $STATE   (CHK_FOR_END,
;  615        P 0613  1          (TPA$_EOS,TPA$_EXIT),
;  616          0614  1          );
```

```
;  618          0615  1 %SBTTL  '$PARSE_ACL system service'
;  619          0616  1 GLOBAL ROUTINE SYS$PARSE_ACL (ACL_STRING, ACL_ENTRY, ERROR_POSITION, BIT_TABLE) =
;  620          0617  1
;  621          0618  1 !++
;  622          0619  1 !
;  623          0620  1 ! FUNCTIONAL DESCRIPTION:
;  624          0621  1 !
;  625          0622  1 !       This routine converts the Access Control Entry from a text form to
;  626          0623  1 !       the binary form.
;  627          0624  1 !
;  628          0625  1 ! CALLING SEQUENCE:
;  629          0626  1 !       SYS$PARSE_ACL (ARG1, ARG2, ARG3, ARG4)
;  630          0627  1 !
;  631          0628  1 ! INPUT PARAMETERS:
;  632          0629  1 !       ARG1: address of the input text descriptor
;  633          0630  1 !       ARG2: address of the output buffer descriptor
;  634          0631  1 !       ARG4: address of an access bit name table
;  635          0632  1 !
;  636          0633  1 ! IMPLICIT INPUTS:
;  637          0634  1 !       none
;  638          0635  1 !
;  639          0636  1 ! OUTPUT PARAMETERS:
;  640          0637  1 !       ARG3: number of characters processed
;  641          0638  1 !
;  642          0639  1 ! IMPLICIT OUTPUTS:
;  643          0640  1 !       none
;  644          0641  1 !
;  645          0642  1 ! ROUTINE VALUE:
;  646          0643  1 !       SS$_NORMAL:     The conversion was successful.
;  647          0644  1 !       SS$_ACCVIO:     The input or output descrtptors cannot be read, the
;  648          0645  1 !                       output buffer cannot be written, or the output buffer
;  649          0646  1 !                       is not large enough to contain the converted ACE.
;  650          0647  1 !       SS$_IVACL:      The syntax of the input ACE is invalid.
;  651          0648  1 !       SS$_NOSUCHID:   The identifier specified in the ACE is not in the
;  652          0649  1 !                       rights database.
;  653          0650  1 !
;  654          0651  1 ! SIDE EFFECTS:
;  655          0652  1 !       none
;  656          0653  1 !
;  657          0654  1 !--
;  658          0655  1
;  659          0656  2 BEGIN
;  660          0657  2
;  661          0658  2 MAP
;  662          0659  2         ACL_STRING      : REF $BBLOCK,          ! Address of input descriptor
;  663          0660  2         ACL_ENTRY       : REF $BBLOCK,          ! Address of output descriptor
;  664          0661  2         ERROR_POSITION  : REF VECTOR [,WORD],   ! Syntax error position
;  665          0662  2         BIT_TABLE       : REF VECTOR;           ! Address of access bit ame tale
;  666          0663  2
;  667          0664  2 LOCAL
;  668          0665  2         STATUS,                                 ! Routine exit status
;  669          0666  2         ACL_STRING_LEN,                         ! Length of input ACL string
;  670          0667  2         ACL_ENTRY_LEN,                          ! Length of output ACE buffer
;  671          0668  2         TPARSE_BLOCK    : $BBLOCK [TPA$K_LENGTH0];      ! Parser context block
;  672          0669  2
;  673          0670  2 EXTERNAL LITERAL
;  674          0671  2         LIB$_SYNTAXERR;
```

```
;  675          0672  2
;  676          0673  2 ! Check to see if an access bit name table was supplied.  If so, use it
;  677          0674  2 ! rather than the default table.
;  678          0675  2
;  679          0676  2 BIT_NAME_TABLE = 0;
;  680          0677  2 IF .BIT_TABLE NEQA 0
;  681          0678  2 THEN IF PROBER (%REF (0), %REF (256), .BIT_TABLE)
;  682          0679  2      THEN BIT_NAME_TABLE = .BIT_TABLE
;  683          0680  2      ELSE RETURN SS$_ACCVIO;
;  684          0681  2
;  685          0682  2 ! Set up initial parameters.
;  686          0683  2
;  687          0684  2 CH$FILL (0, ATR$S_READACL, ACE_BUFFER);
;  688          0685  2 ACE_INDEX = ACE_TYPE = ACE_RIGHTS = 0;
;  689          0686  2 UIC_FLAGS = UIC_COUNT = 0;
;  690          0687  2 ID_COUNT = 0;
;  691          0688  2 ACCESS_FLAGS = 0;
;  692          0689  2 JOURNAL_NAME[DSC$W_LENGTH] = ID_NAME[DSC$W_LENGTH] = 0;
;  693          0690  2 SYSTEM_PROT = OWNER_PROT = GROUP_PROT = WORLD_PROT = 0;
;  694          0691  2
;  695          0692  2 CH$FILL (0, TPA$K_LENGTH0, TPARSE_BLOCK);
;  696          0693  2 TPARSE_BLOCK[TPA$L_COUNT] = TPA$K_COUNT0;
;  697          0694  2 TPARSE_BLOCK[TPA$V_ABBREV] = 1;
;  698          0695  2 IF PROBER (%REF (0), %REF (DSC$C_S_BLN), .ACL_STRING)
;  699          0696  2 THEN
;  700          0697  3     BEGIN
;  701          0698  3     ACL_STRING_LEN = TPARSE_BLOCK[TPA$L_STRINGCNT] = .ACL_STRING[DSC$W_LENGTH];
;  702          0699  3     IF EXE$PROBER (0, .ACL_STRING_LEN, .ACL_STRING[DSC$A_POINTER])
;  703          0700  3     THEN TPARSE_BLOCK[TPA$L_STRINGPTR] = .ACL_STRING[DSC$A_POINTER]
;  704          0701  3     ELSE RETURN SS$_ACCVIO;
;  705          0702  3     END
;  706          0703  2 ELSE RETURN SS$_ACCVIO;
;  707          0704  2
;  708          0705  2 STATUS = LIB$TPARSE (TPARSE_BLOCK, ACE_STATE, ACE_KEY);
;  709          0706  2
;  710          0707  2 ! If necessary set the number of characters processed.
;  711          0708  2
;  712          0709  2 IF .ERROR_POSITION NEQA 0
;  713          0710  2 THEN IF PROBEW (%REF (0), %REF (2), .ERROR_POSITION)
;  714          0711  2      THEN ERROR_POSITION[0] = .ACL_STRING_LEN -
;  715          0712  2                               .TPARSE_BLOCK[TPA$L_STRINGCNT]
;  716          0713  2      ELSE RETURN SS$_ACCVIO;
;  717          0714  2
;  718          0715  2 ! If there 1) are any syntax errors, 2) is an invalid ACE type (zero),
;  719          0716  2 ! or 3) is remaining text to the ACE; return an error.
;  720          0717  2
;  721          0718  2 IF .STATUS EQL LIB$_SYNTAXERR
;  722          0719  2 OR .ACE_TYPE EQL 0
;  723          0720  3 OR (.STATUS AND .TPARSE_BLOCK[TPA$L_STRINGCNT] GTR 0)
;  724          0721  2 THEN RETURN SS$_IVACL;
;  725          0722  2
;  726          0723  2 IF NOT .STATUS THEN RETURN .STATUS;
;  727          0724  2
;  728          0725  2 ! Set up the standard ACE fields.
;  729          0726  2
;  730          0727  2 ACE_BUFFER[ACE$B_TYPE] = .ACE_TYPE;
;  731          0728  2 ACE_BUFFER[ACE$W_FLAGS] = .ACE_BUFFER[ACE$W_FLAGS]
```

```
;  732          0729  2                              OR .UIC_FLAGS
;  733          0730  2                              OR .ACCESS_FLAGS;
;  734          0731  2 ACE_BUFFER[ACE$L_ACCESS] = .ACE_RIGHTS;
;  735          0732  2
;  736          0733  2 ! Based upon the type code, finish up the ACE.  Then do the final error
;  737          0734  2 ! checking to make sure that I didn't get more than I wanted.
;  738          0735  2
;  739          0736  2 CASE .ACE_TYPE FROM ACE$C_KEYID TO ACE$C_DIRDEF OF
;  740          0737  2 SET
;  741          0738  2     [ACE$C_KEYID]:
;  742          0739  3         BEGIN
;  743          0740  3         IF .ACCESS_FLAGS NEQ 0
;  744          0741  3         OR .JOURNAL_NAME[DSC$W_LENGTH] NEQ 0
;  745          0742  3         OR .UIC_COUNT GTR 1
;  746          0743  3         OR .ACE_INDEX EQL 0
;  747          0744  3         THEN RETURN SS$_IVACL;
;  748          0745  3         ACE_BUFFER[ACE$B_SIZE] = ACE$C_LENGTH + .ACE_INDEX * 4;
;  749          0746  2         END;
;  750          0747  2     [ACE$C_BIJNL,
;  751          0748  2      ACE$C_AIJNL,
;  752          0749  2      ACE$C_ATJNL]:
;  753          0750  3         BEGIN
;  754          0751  3         IF NOT .JOURNAL_ACES THEN RETURN SS$_IVACL;
;  755          0752  3         IF .UIC_COUNT NEQ 0
;  756          0753  3         OR .ID_COUNT NEQ 0
;  757          0754  3         OR .ACCESS_FLAGS NEQ 0
;  758          0755  3         OR .ACE_RIGHTS NEQ 0
;  759          0756  3         THEN RETURN SS$_IVACL;
;  760          0757  3         CH$MOVE (.JOURNAL_NAME[DSC$W_LENGTH],
;  761          0758  3                  .JOURNAL_NAME[DSC$A_POINTER],
;  762          0759  3                  ACE_BUFFER[ACE$L_ACCESS]);
;  763          0760  3         ACE_BUFFER[ACE$B_SIZE] = .JOURNAL_NAME[DSC$W_LENGTH] +
;  764          0761  3                                  $BYTEOFFSET (ACE$L_ACCESS);
;  765          0762  2         END;
;  766          0763  2     [ACE$C_AUDIT,
;  767          0764  2      ACE$C_ALARM]:
;  768          0765  3         BEGIN
;  769          0766  3         IF .UIC_COUNT NEQ 0
;  770          0767  3         OR .ID_COUNT NEQ 0
;  771          0768  3         OR .JOURNAL_NAME[DSC$W_LENGTH] NEQ %CHARCOUNT ('SECURITY')
;  772          0769  3         OR CH$NEQ (%CHARCOUNT ('SECURITY'), UPLIT ('SECURITY'),
;  773          0770  3                    .JOURNAL_NAME[DSC$W_LENGTH], .JOURNAL_NAME[DSC$A_POINTER], 0)
;  774          0771  3         THEN RETURN SS$_IVACL;
;  775          0772  3         CH$MOVE (.JOURNAL_NAME[DSC$W_LENGTH],
;  776          0773  3                  .JOURNAL_NAME[DSC$A_POINTER],
;  777          0774  3                  ACE_BUFFER[ACE$L_KEY]);
;  778          0775  3         ACE_BUFFER[ACE$B_SIZE] = ACE$C_LENGTH + .JOURNAL_NAME[DSC$W_LENGTH];
;  779          0776  2         END;
;  780          0777  2     [ACE$C_DIRDEF]:
;  781          0778  3         BEGIN
;  782          0779  3         IF .ACCESS_FLAGS NEQ 0
;  783          0780  3         OR .JOURNAL_NAME[DSC$W_LENGTH] NEQ 0
;  784          0781  3         OR .UIC_COUNT NEQ 0
;  785          0782  3         OR .ID_COUNT NEQ 0
;  786          0783  3         THEN RETURN SS$_IVACL;
;  787          0784  3         SYSTEM_PROT = NOT .SYSTEM_PROT;
;  788          0785  3         SYSTEM_PROT[ARM$V_FILL] = 0;
```

```
;  789          0786  3          ACE_BUFFER[ACE$L_SYS_PROT] = .SYSTEM_PROT;
;  790          0787  3          OWNER_PROT = NOT .OWNER_PROT;
;  791          0788  3          OWNER_PROT[ARM$V_FILL] = 0;
;  792          0789  3          ACE_BUFFER[ACE$L_OWN_PROT] = .OWNER_PROT;
;  793          0790  3          GROUP_PROT = NOT .GROUP_PROT;
;  794          0791  3          GROUP_PROT[ARM$V_FILL] = 0;
;  795          0792  3          ACE_BUFFER[ACE$L_GRP_PROT] = .GROUP_PROT;
;  796          0793  3          WORLD_PROT = NOT .WORLD_PROT;
;  797          0794  3          WORLD_PROT[ARM$V_FILL] = 0;
;  798          0795  3          ACE_BUFFER[ACE$L_WOR_PROT] = .WORLD_PROT;
;  799          0796  3          ACE_BUFFER[ACE$B_SIZE] = ACE$C_LENGTH + 16;
;  800          0797  2          END;
;  801          0798  2      [INRANGE,
;  802          0799  2       OUTRANGE]: RETURN SS$_IVACL;
;  803          0800  2 TES;
;  804          0801  2
;  805          0802  2 ! Check to make sure there is room to receive the ACE.
;  806          0803  2
;  807          0804  2 IF PROBER (%REF (0), %REF (DSC$C_S_BLN), .ACL_ENTRY)
;  808          0805  2 THEN
;  809          0806  3      BEGIN
;  810          0807  3      ACL_ENTRY_LEN = .ACL_ENTRY[DSC$W_LENGTH];
;  811          0808  3      IF .ACE_BUFFER[ACE$B_SIZE] LEQU .ACL_ENTRY_LEN
;  812          0809  3      AND EXE$PROBEW (0, .ACL_ENTRY_LEN, .ACL_ENTRY[DSC$A_POINTER])
;  813          0810  3      THEN CH$COPY (.ACE_BUFFER[ACE$B_SIZE], ACE_BUFFER, 0,
;  814          0811  3                    .ACL_ENTRY[DSC$W_LENGTH], .ACL_ENTRY[DSC$A_POINTER])
;  815          0812  3      ELSE RETURN SS$_ACCVIO;
;  816          0813  3      END
;  817          0814  2 ELSE RETURN SS$_ACCVIO;
;  818          0815  2
;  819          0816  2 RETURN SS$_NORMAL;
;  820          0817  2
;  821          0818  1 END;                                    ! End of routine SYS$PARSE_ACL


                                        .TITLE  SYSACLSRV
                                        .IDENT  \V04-000\

                                        .PSECT  _LIB$KEY1$,NOWRT,  SHR,  PIC,1

                                00000 ;TPA$KEYSTO
                                U.3:    .BLKB   0
                     52 45 49 46 49 54 4E 45 44 49 00000 ;TPA$KEYST
                                U.5:    .ASCII  \IDENTIFIER\                    ;
                                   FF 0000A     .BYTE   -1                      ;
                                0000B ;TPA$KEYSTO
                                U.11:   .BLKB   0
45 4D 41 4E 5F 4C 41 4E 52 55 4F 4A 5F 49 42 0000B ;TPA$KEYST
                                U.13:   .ASCII  \BI_JOURNAL_NAME\               ;
                                   FF 0001A     .BYTE   -1                      ;
                                0001B ;TPA$KEYSTO
                                U.19:   .BLKB   0
45 4D 41 4E 5F 4C 41 4E 52 55 4F 4A 5F 49 41 0001B ;TPA$KEYST
                                U.21:   .ASCII  \AI_JOURNAL_NAME\               ;
                                   FF 0002A     .BYTE   -1                      ;
                                0002B ;TPA$KEYSTO
                                U.26:   .BLKB   0
```

```
45 4D 41 4E 5F 4C 41 4E 52 55 4F 4A 5F 54 41 0002B ;TPA$KEYST
                                                    U.28:   .ASCII  \AT_JOURNAL_NAME\                ;
                                                FF  0003A           .BYTE   -1                       ;
                                                    0003B ;TPA$KEYSTO
                                                    U.33:   .BLKB   0
                  4C 41 4E 52 55 4F 4A 5F 54 49 44 55 41 0003B ;TPA$KEYST
                                                    U.35:   .ASCII  \AUDIT_JOURNAL\                  ;
                                                FF  00048           .BYTE   -1                       ;
                                                    00049 ;TPA$KEYSTO
                                                    U.41:   .BLKB   0
                  4C 41 4E 52 55 4F 4A 5F 4D 52 41 4C 41 00049 ;TPA$KEYST
                                                    U.43:   .ASCII  \ALARM_JOURNAL\                  ;
                                                FF  00056           .BYTE   -1                       ;
                                                    00057 ;TPA$KEYSTO
                                                    U.49:   .BLKB   0
                                 53 53 45 43 43 41 00057 ;TPA$KEYST
                                                    U.51:   .ASCII  \ACCESS\                         ;
                                                FF  0005D           .BYTE   -1                       ;
                                                    0005E ;TPA$KEYSTO
                                                    U.55:   .BLKB   0
                              53 4E 4F 49 54 50 4F 0005E ;TPA$KEYST
                                                    U.57:   .ASCII  \OPTIONS\                        ;
                                                FF  00065           .BYTE   -1                       ;
                                                    00066 ;TPA$KEYSTO
                                                    U.61:   .BLKB   0
54 43 45 54 4F 52 50 5F 54 4C 55 41 46 45 44 00066 ;TPA$KEYST
                                                    U.63:   .ASCII  \DEFAULT_PROTECTION\             ;
                                       4E 4F 49 00075                                                ;
                                                FF  00078           .BYTE   -1                       ;
                                                FF  00079 ;TPA$KEYFILL                               ;
                                                    U.69:   .BYTE   -1                               ;
                                                    0007A ;TPA$KEYSTO
                                                    U.116:  .BLKB   0
53 53 45 43 43 55 53 0007A ;TPA$KEYST
                                                    U.118:  .ASCII  \SUCCESS\                        ;
                                                FF  00081           .BYTE   -1                       ;
                                                    00082 ;TPA$KEYSTO
                                                    U.122:  .BLKB   0
45 52 55 4C 49 41 46 00082 ;TPA$KEYST
                                                    U.124:  .ASCII  \FAILURE\                        ;
                                                FF  00089           .BYTE   -1                       ;
                                                    0008A ;TPA$KEYSTO
                                                    U.128:  .BLKB   0
                     45 4E 4F 4E 0008A ;TPA$KEYST
                                                    U.130:  .ASCII  \NONE\                           ;
                                                FF  0008E           .BYTE   -1                       ;
                                                FF  0008F ;TPA$KEYFILL                               ;
                                                    U.135:  .BYTE   -1                               ;
                                                    00090 ;TPA$KEYSTO
                                                    U.144:  .BLKB   0
54 4C 55 41 46 45 44 00090 ;TPA$KEYST
                                                    U.146:  .ASCII  \DEFAULT\                        ;
                                                FF  00097           .BYTE   -1                       ;
                                                    00098 ;TPA$KEYSTO
                                                    U.150:  .BLKB   0
   4E 45 44 44 49 48 00098 ;TPA$KEYST
                                                    U.152:  .ASCII  \HIDDEN\                         ;
```

```
                                                FF  0009E          .BYTE   -1                                       ;
                                                    0009F ;TPA$KEYSTO
                                                          U.156:   .BLKB   0
                                    44  45  54  43  45  54  4F  52  50  0009F ;TPA$KEYST
                                                          U.158:   .ASCII  \PROTECTED\                            ;
                                                FF  000A8          .BYTE   -1                                       ;
                                                    000A9 ;TPA$KEYSTO
                                                          U.162:   .BLKB   0
                                45  54  41  47  41  50  4F  52  50  4F  4E  000A9 ;TPA$KEYST
                                                          U.164:   .ASCII  \NOPROPAGATE\                          ;
                                                FF  000B4          .BYTE   -1                                       ;
                                                    000B5 ;TPA$KEYSTO
                                                          U.168:   .BLKB   0
                                                45  4E  4F  4E  000B5 ;TPA$KEYST
                                                          U.170:   .ASCII  \NONE\                                 ;
                                                FF  000B9          .BYTE   -1                                       ;
                                                FF  000BA ;TPA$KEYFILL
                                                          U.172:   .BYTE   -1                                      ;
                                                    000BB ;TPA$KEYSTO
                                                          U.180:   .BLKB   0
                                            4D  45  54  53  59  53  000BB ;TPA$KEYST
                                                          U.182:   .ASCII  \SYSTEM\                               ;
                                                FF  000C1          .BYTE   -1                                       ;
                                                    000C2 ;TPA$KEYSTO
                                                          U.186:   .BLKB   0
                                                52  45  4E  57  4F  000C2 ;TPA$KEYST
                                                          U.188:   .ASCII  \OWNER\                                ;
                                                FF  000C7          .BYTE   -1                                       ;
                                                    000C8 ;TPA$KEYSTO
                                                          U.192:   .BLKB   0
                                            50  55  4F  52  47  000C8 ;TPA$KEYST
                                                          U.194:   .ASCII  \GROUP\                                ;
                                                FF  000CD          .BYTE   -1                                       ;
                                                    000CE ;TPA$KEYSTO
                                                          U.198:   .BLKB   0
                                        44  4C  52  4F  57  000CE ;TPA$KEYST
                                                          U.200:   .ASCII  \WORLD\                                ;
                                                FF  000D3          .BYTE   -1                                       ;
                                                FF  000D4 ;TPA$KEYFILL
                                                          U.206:   .BYTE   -1                                      ;

                                                                   .PSECT  _LIB$STATE$,NOWRT,  SHR,  PIC,1

                                                    00000 ACE_STATE::
                                                                   .BLKB   0
                                                0428  00000 ;TPA$TYPE
                                                          U.2:     .WORD   1064                                    ;
                                                    00002 GET_KEYWORD:
                                                                   .BLKB   0
                                                7100  00002 ;TPA$TYPE
                                                          U.6:     .WORD   28928                                   ;
                                            00000000*  00004 ;TPA$ADDR
                                                          U.7:     .LONG   <<ACE_TYPE-U.7>-4>                      ;
                                            00000001   00008 ;TPA$MASK
                                                          U.8:     .LONG   1                                       ;
                                                0000*  0000C ;TPA$TARGET
                                                          U.10:    .WORD   <<U.9-U.10>-2>                          ;
```

```
                     7101  0000E ;TPA$TYPE
                                 U.14:    .WORD   28929                          ;
                 00000000* 00010 ;TPA$ADDR
                                 U.15:    .LONG   <<ACE_TYPE-U.15>-4>            ;
                 00000002  00014 ;TPA$MASK
                                 U.16:    .LONG   2                              ;
                     0000* 00018 ;TPA$TARGET
                                 U.18:    .WORD   <<U.17-U.18>-2>                ;
                     7102  0001A ;TPA$TYPE
                                 U.22:    .WORD   28930                          ;
                 00000000* 0001C ;TPA$ADDR
                                 U.23:    .LONG   <<ACE_TYPE-U.23>-4>            ;
                 00000003  00020 ;TPA$MASK
                                 U.24:    .L      3                              ;
                     0000* 00024 ;TPA$TARGET
                                 U.25:    .WORD   <<U.17-U.25>-2>                ;
                     7103  00026 ;TPA$TYPE
                                 U.29:    .WORD   28931                          ;
                 00000000* 00028 ;TPA$ADDR
                                 U.30:    .LONG   <<ACE_TYPE-U.30>-4>            ;
                 00000004  0002C ;TPA$MASK
                                 U.31:    .LONG   4                              ;
                     0000* 00030 ;TPA$TARGET
                                 U.32:    .WORD   <<U.17-U.32>-2>                ;
                     7104  00032 ;TPA$TYPE
                                 U.36:    .WORD   28932                          ;
                 00000000* 00034 ;TPA$ADDR
                                 U.37:    .LONG   <<ACE_TYPE-U.37>-4>            ;
                 00000005  00038 ;TPA$MASK
                                 U.38:    .LONG   5                              ;
                     0000* 0003C ;TPA$TARGET
                                 U.40:    .WORD   <<U.39-U.40>-2>                ;
                     7105  0003E ;TPA$TYPE
                                 U.44:    .WORD   28933                          ;
                 00000000* 00040 ;TPA$ADDR
                                 U.45:    .LONG   <<ACE_TYPE-U.45>-4>            ;
                 00000006  00044 ;TPA$MASK
                                 U.46:    .LONG   6                              ;
                     0000* 00048 ;TPA$TARGET
                                 U.48:    .WORD   <<U.47-U.48>-2>                ;
                     1106  0004A ;TPA$TYPE
                                 U.52:    .WORD   4358                           ;
                     0000* 0004C ;TPA$TARGET
                                 U.54:    .WORD   <<U.53-U.54>-2>                ;
                     1107  0004E ;TPA$TYPE
                                 U.58:    .WORD   4359                           ;
                     0000* 00050 ;TPA$TARGET
                                 U.60:    .WORD   <<U.59-U.60>-2>                ;
                     7508  00052 ;TPA$TYPE
                                 U.64:    .WORD   29960                          ;
                 00000000* 00054 ;TPA$ADDR
                                 U.65:    .LONG   <<ACE_TYPE-U.65>-4>            ;
                 0000000?  00058 ;TPA$MASK
                                 U.66:    .LONG   9                              ;
                     0000* 0005C ;TPA$TARGET
                                 U.68:    .WORD   <<U.67-U.68>-2>                ;
                     102C  0005E ;TPA$TYPE
```

```
                        U.70:   .WORD   4140                                    ;
0000*  00060 ;TPA$TARGET
                        U.71:   .WORD   <<GET_KEYWORD-U.71>-2>                  ;
1429   00062 ;TPA$TYPE
                        U.72:   .WORD   5161                                    ;
0000*  00064 ;TPA$TARGET
                        U.74:   .WORD   <<U.73-U.74>-2>                         ;
       00066 ;GET_ID
                        U.9:    .BLKB   0
003D   00066 ;TPA$TYPE
                        U.75:   .WORD   61                                      ;
043A   00068 ;TPA$TYPE
                        U.76:   .WORD   1082                                    ;
       0006A GET_IDTYPE:
                                .BLKB   0
45EC   0006A ;TPA$TYPE
                        U.77:   .WORD   17900                                   ;
00000000*  0006C ;TPA$ADDR
                        U.78:   .LONG   <<IDENTIFIER-U.78>-4>                   ;
       00070 CHK_ENDID:
                                .BLKB   0
902C   00070 ;TPA$TYPE
                        U.79:   .WORD   -28628                                  ;
00000000V  00072 ;TPA$ACTION
                        U.80:   .LONG   <<SET_ID-U.80>-4>                       ;
0000*  00076 ;TPA$TARGET
                        U.81:   .WORD   <<GET_KEYWORD-U.81>-2>                  ;
902B   00078 ;TPA$TYPE
                        U.82:   .WORD   -28629                                  ;
00000000V  0007A ;TPA$ACTION
                        U.83:   .LONG   <<SET_ID-U.83>-4>                       ;
0000*  0007E ;TPA$TARGET
                        U.84:   .WORD   <<GET_IDTYPE-U.84>-2>                   ;
9429   00080 ;TPA$TYPE
                        U.85:   .WORD   -27607                                  ;
00000000V  00082 ;TPA$ACTION
                        U.86:   .LONG   <<SET_ID-U.86>-4>                       ;
0000*  00086 ;TPA$TARGET
                        U.87:   .WORD   <<U.73-U.87>-2>                         ;
       00088 ;GET_JNL
                        U.17:   .BLKB   0
003D   00088 ;TPA$TYPE
                        U.88:   .WORD   61                                      ;
043A   0008A ;TPA$TYPE
                        U.89:   .WORD   1082                                    ;
4DF8   0008C ;TPA$TYPE
                        U.90:   .WORD   19960                                   ;
0000*  0008E ;TPA$SUBEXP
                        U.92:   .WORD   <<U.91-U.92>-2>                         ;
00000000*  00090 ;TPA$ADDR
                        U.93:   .LONG   <<JOURNAL_NAME-U.93>-4>                 ;
1429   00094 ;TPA$TYPE
                        U.94:   .WORD   5161                                    ;
0000*  00096 ;TPA$TARGET
                        U.95:   .WORD   <<U.73-U.95>-2>                         ;
       00098 ;GET_AUDIT
                        U.39:   .BLKB   0
```

```
                     003D  00098 ;TPA$TYPE
                                   U.96:    .WORD   61                                      ;
                     043A  0009A ;TPA$TYPE
                                   U.97:    .WORD   1082                                    ;
                     4DF8  0009C ;TPA$TYPE
                                   U.98:    .WORD   19960                                   ;
                     0000* 0009E ;TPA$SUBEXP
                                   U.99:    .WORD   <<U.91-U.99>-2>                         ;
                00000000* 000A0 ;TPA$ADDR
                                   U.100:   .LONG   <<JOURNAL_NAME-U.100>-4>                ;
                     102C  000A4 ;TPA$TYPE
                                   U.101:   .WORD   4140                                    ;
                     0000* 000A6 ;TPA$TARGET
                                   U.102:   .WORD   <<GET_KEYWORD-U.102>-2>                 ;
                     1429  000A8 ;TPA$TYPE
                                   U.103:   .WORD   5161                                    ;
                     0000* 000AA ;TPA$TARGET
                                   U.104:   .WORD   <<U.73-U.104>-2>                        ;
                           000AC ;GET_ALARM
                                   U.47:    .BLKB   0
                     003D  000AC ;TPA$TYPE
                                   U.105:   .WORD   61                                      ;
                     043A  000AE ;TPA$TYPE
                                   U.10o:   .WORD   1082                                    ;
                     4DF8  000B0 ;TPA$TYPE
                                   U.107:   .WORD   19960                                   ;
                     0000* 000B2 ;TPA$SUBEXP
                                   U.108:   .WORD   <<U.91-U.108>-2>                        ;
                00000000* 000B4 ;TPA$ADDR
                                   U.109:   .LONG   <<JOURNAL_NAME-U.109>-4>                ;
                     102C  000B8 ;TPA$TYPE
                                   U.110:   .WORD   4140                                    ;
                     0000* 000BA ;TPA$TARGET
                                   U.111:   .WORD   <<GET_KEYWORD-U.111>-2>                 ;
                     1429  000BC ;TPA$TYPE
                                   U.112:   .WORD   5161                                    ;
                     0000* 000BE ;TPA$TARGET
                                   U.113:   .WORD   <<U.73-U.113>-2>                        ;
                           000C0 ;GET_ACCESS
                                   U.53:    .BLKB   0
                     003D  000C0 ;TPA$TYPE
                                   U.114:   .WORD   61                                      ;
                     043A  000C2 ;TPA$TYPE
                                   U.115:   .WORD   1082                                    ;
                           000C4 GET_ACCTYPE:
                                            .BLKB   0
                     6109  000C4 ;TPA$TYPE
                                   U.119:   .WORD   24841                                   ;
                00000000* 000C6 ;TPA$ADDR
                                   U.120:   .LONG   <<ACCESS_FLAGS-U.120>-4>                ;
                00000001  000CA ;TPA$MASK
                                   U.121:   .LONG   1                                       ;
                     610A  000CE ;TPA$TYPE
                                   U.125:   .WORD   24842                                   ;
                00000000* 000D0 ;TPA$ADDR
                                   U.126:   .LONG   <<ACCESS_FLAGS-U.126>-4>                ;
                00000002  000D4 ;TPA$MASK
```

```
                        U.127:  .LONG   2                                       ;
    010B  000D8 ;TPA$TYPE
                        U.131:  .WORD   267                                     ;
    8DF8  000DA ;TPA$TYPE
                        U.132:  .WORD   -29192                                  ;
    0000* 000DC ;TPA$SUBEXP
                        U.133:  .WORD   <<U.91-U.133>-2>                        ;
00000000V 000DE ;TPA$ACTION
                        U.134:  .LONG   <<SET_ACCESS_BIT-U.134>-4>              ;
    102B  000E2 ;TPA$TYPE
                        U.136:  .WORD   4139                                    ;
    0000* 000E4 ;TPA$TARGET
                        U.137:  .WORD   <<GET_ACCTYPE-U.137>-2>                 ;
    1029  000E6 ;TPA$TYPE
                        U.138:  .WORD   4137                                    ;
    0000* 000E8 ;TPA$TARGET
                        U.139:  .WORD   <<U.73-U.139>-2>                        ;
    142C  000EA ;TPA$TYPE
                        U.140:  .WORD   5164                                    ;
    0000* 000EC ;TPA$TARGET
                        U.141:  .WORD   <<GET_KEYWORD-U.141>-2>                 ;
          000EE ;GET_FLAGS
                        U.59:   .BLKB   0
    003D  000EE ;TPA$TYPE
                        U.142:  .WORD   61                                      ;
    043A  000F0 ;TPA$TYPE
                        U.143:  .WORD   1082                                    ;
          000F2 GET_FLAGTYPE:
                        .BLKB   0
    610C  000F2 ;TPA$TYPE
                        U.147:  .WORD   24844                                   ;
00000000* 000F4 ;TPA$ADDR
                        U.148:  .LONG   <<<ACE_BUFFER+2>-U.148>-4>              ;
00000100  000F8 ;TPA$MASK
                        U.149:  .LONG   256                                     ;
    610D  000FC ;TPA$TYPE
                        U.153:  .WORD   24845                                   ;
00000000* 000FE ;TPA$ADDR
                        U.154:  .LONG   <<<ACE_BUFFER+2>-U.154>-4>              ;
00000400  00102 ;TPA$MASK
                        U.155:  .LONG   1024                                    ;
    610E  00106 ;TPA$TYPE
                        U.159:  .WORD   24846                                   ;
00000000* 00108 ;TPA$ADDR
                        U.160:  .LONG   <<<ACE_BUFFER+2>-U.160>-4>              ;
00000200  0010C ;TPA$MASK
                        U.161:  .LONG   512                                     ;
    610F  00110 ;TPA$TYPE
                        U.165:  .WORD   24847                                   ;
00000000* 00112 ;TPA$ADDR
                        U.166:  .LONG   <<<ACE_BUFFER+2>-U.166>-4>              ;
00000800  00116 ;TPA$MASK
                        U.167:  .LONG   2048                                    ;
    0510  0011A ;TPA$TYPE
                        U.171:  .WORD   1296                                    ;
    102B  0011C ;TPA$TYPE
                        U.173:  .WORD   4139                                    ;
```

```
0000* 0011E ;TPA$TARGET
            U.174:   .WORD   <<GET_FLAGTYPE-U.174>-2>                ;
1029  00120 ;TPA$TYPE
            U.175:   .WORD   4137                                    ;
0000* 00122 ;TPA$TARGET
            U.176:   .WORD   <<U.73-U.176>-2>                        ;
142C  00124 ;TPA$TYPE
            U.177:   .WORD   5164                                    ;
0000* 00126 ;TPA$TARGET
            U.178:   .WORD   <<GET_KEYWORD-U.178>-2>                 ;
      00128 ;GET_PROT
            U.67:    .BLKB   0
042C  00128 ;TPA$TYPE
            U.179:   .WORD   1068                                    ;
      0012A GET_PROT_CLASS:
                     .BLKB   0
1111  0012A ;TPA$TYPE
            U.183:   .WORD   4369                                    ;
0000* 0012C ;TPA$TARGET
            U.185:   .WORD   <<U.184-U.185>-2>                       ;
1112  0012E ;TPA$TYPE
            U.189:   .WORD   4370                                    ;
0000* 00130 ;TPA$TARGET
            U.191:   .WORD   <<U.190-U.191>-2>                       ;
1113  00132 ;TPA$TYPE
            U.195:   .WORD   4371                                    ;
0000* 00134 ;TPA$TARGET
            U.197:   .WORD   <<U.196-U.197>-2>                       ;
1114  00136 ;TPA$TYPE
            U.201:   .WORD   4372                                    ;
0000* 00138 ;TPA$TARGET
            U.203:   .WORD   <<U.202-U.203>-2>                       ;
15F6  0013A ;TPA$TYPE
            U.204:   .WORD   5622                                    ;
0000* 0013C ;TPA$TARGET
            U.205:   .WORD   <<GET_KEYWORD-U.205>-2>                 ;
      0013E ;GET_SYS_PRO
            U.184:   .BLKB   0
003A  0013E ;TPA$TYPE
            U.207:   .WORD   58                                      ;
003D  00140 ;TPA$TYPE
            U.208:   .WORD   61                                      ;
15F6  00142 ;TPA$TYPE
            U.209:   .WORD   5622                                    ;
0000* 00144 ;TPA$TARGET
            U.211:   .WORD   <<U.210-U.211>-2>                       ;
      00146 GET_SYS_PRO1:
                     .BLKB   0
7052  00146 ;TPA$TYPE
            U.212:   .WORD   28754                                   ;
00000000* 00148 ;TPA$ADDR
            U.213:   .LONG   <<SYSTEM_PROT-U.213>-4>                 ;
00000001  0014C ;TPA$MASK
            U.214:   .LONG   1                                       ;
0000* 00150 ;TPA$TARGET
            U.215:   .WORD   <<GET_SYS_PRO1-U.215>-2>                ;
7057  00152 ;TPA$TYPE
```

```
                        U.216:  .WORD   28759                           ;
00000000*  00154  ;TPA$ADDR
                        U.217:  .LONG   <<SYSTEM_PROT-U.217>-4>         ;
00000002   00158  ;TPA$MASK
                        U.218:  .LONG   2                               ;
    0000*  0015C  ;TPA$TARGET
                        U.219:  .WORD   <<GET_SYS_PRO1-U.219>-2>        ;
    7045   0015E  ;TPA$TYPE
                        U.220:  .WORD   28741                           ;
00000000*  00160  ;TPA$ADDR
                        U.221:  .LONG   <<SYSTEM_PROT-U.221>-4>         ;
00000004   00164  ;TPA$MASK
                        U.222:  .LONG   4                               ;
    0000*  00168  ;TPA$TARGET
                        U.223:  .WORD   <<GET_SYS_PRO1-U.223>-2>        ;
    7044   0016A  ;TPA$TYPE
                        U.224:  .WORD   28740                           ;
00000000*  0016C  ;TPA$ADDR
                        U.225:  .LONG   <<SYSTEM_PROT-U.225>-4>         ;
00000008   00170  ;TPA$MASK
                        U.226:  .LONG   8                               ;
    0000*  00174  ;TPA$TARGET
                        U.227:  .WORD   <<GET_SYS_PRO1-U.227>-2>        ;
    7043   00176  ;TPA$TYPE
                        U.228:  .WORD   28739                           ;
00000000*  00178  ;TPA$ADDR
                        U.229:  .LONG   <<SYSTEM_PROT-U.229>-4>         ;
00000010   0017C  ;TPA$MASK
                        U.230:  .LONG   16                              ;
    0000*  00180  ;TPA$TARGET
                        U.231:  .WORD   <<GET_SYS_PRO1-U.231>-2>        ;
    15F6   00182  ;TPA$TYPE
                        U.232:  .WORD   5622                            ;
    0000*  0018'  ;TPA$TARGET
                        U.233:  .WORD   <<U.210-U.233>-2>               ;
           00186  ;GET_OWN_PRO
                        U.190:  .BLKB   0
    003A   00186  ;TPA$TYPE
                        U.234:  .WORD   58                              ;
    003D   00188  ;TPA$TYPE
                        U.235:  .WORD   61                              ;
    15F6   0018A  ;TPA$TYPE
                        U.236:  .WORD   5622                            ;
    0000*  0018C  ;TPA$TARGET
                        U.237:  .WORD   <<U.210-U.237>-2>               ;
           0018E  GET_OWN_PRO1:
                        .BLKB   0
    7052   0018E  ;TPA$TYPE
                        U.238:  .WORD   28754                           ;
00000000*  00190  ;TPA$ADDR
                        U.239:  .LONG   <<OWNER_PROT-U.239>-4>          ;
00000001   00194  ;TPA$MASK
                        U.240:  .LONG   1                               ;
    0000*  00198  ;TPA$TARGET
                        U.241:  .WORD   <<GET_OWN_PRO1-U.241>-2>        ;
    7057   0019A  ;TPA$TYPE
                        U.242:  .WORD   28759                           ;
```

```
00000000* 0019C ;TPA$ADDR
                U.243:  .LONG   <<OWNER_PROT-U.243>-4>                  ;
00000002  001A0 ;TPA$MASK
                U.244:  .LONG   2                                       ;
    0000* 001A4 ;TPA$TARGET
                U.245:  .WORD   <<GET_OWN_PRO1-U.245>-2>                ;
     7045 001A6 ;TPA$TYPE
                U.246:  .WORD   28741                                   ;
00000000* 001A8 ;TPA$ADDR
                U.247:  .LONG   <<OWNER_PROT-U.247>-4>                  ;
00000004  001AC ;TPA$MASK
                U.248:  .LONG   4                                       ;
    0000* 001B0 ;TPA$TARGET
                U.249:  .WORD   <<GET_OWN_PRO1-U.249>-2>                ;
     7044 001B2 ;TPA$TYPE
                U.250:  .WORD   28740                                   ;
00000000* 001B4 ;TPA$ADDR
                U.251:  .LONG   <<OWNER_PROT-U.251>-4>                  ;
00000008  001B8 ;TPA$MASK
                U.252:  .LONG   8                                       ;
    0000* 001BC ;TPA$TARGET
                U.253:  .WORD   <<GET_OWN_PRO1-U.253>-2>                ;
     7043 001BE ;TPA$TYPE
                U.254:  .WORD   28739                                   ;
00000000* 001C0 ;TPA$ADDR
                U.255:  .LONG   <<OWNER_PROT-U.255>-4>                  ;
00000010  001C4 ;TPA$MASK
                U.256:  .LONG   16                                      ;
    0000* 001C8 ;TPA$TARGET
                U.257:  .WORD   <<GET_OWN_PRO1-U.257>-2>                ;
     15F6 001CA ;TPA$TYPE
                U.258:  .WORD   5622                                    ;
    0000* 001CC ;TPA$TARGET
                U.259:  .WORD   <<U.210-U.259>-2>                       ;
          001CE ;GET_GRP_PRO
                U.196:  .BLKB   0
     003A 001CE ;TPA$TYPE
                U.260:  .WORD   58                                      ;
     003D 001D0 ;TPA$TYPE
                U.261:  .WORD   61                                      ;
     15F6 001D2 ;TPA$TYPE
                U.262:  .WORD   5622                                    ;
    0000* 001D4 ;TPA$TARGET
                U.263:  .WORD   <<U.210-U.263>-2>                       ;
          001D6 GET_GRP_PRO1:
                        .BLKB   0
     7052 001D6 ;TPA$TYPE
                U.264:  .WORD   28754                                   ;
00000000* 001D8 ;TPA$ADDR
                U.265:  .LONG   <<GROUP_PROT-U.265>-4>                  ;
00000001  001DC ;TPA$MASK
                U.266:  .LONG   1                                       ;
    0000* 001E0 ;TPA$TARGET
                U.267:  .WORD   <<GET_GRP_PRO1-U.267>-2>                ;
     7057 001E2 ;TPA$TYPE
                U.268:  .WORD   28759                                   ;
00000000* 001E4 ;TPA$ADDR
```

```
                        U.269:  .LONG   <<GROUP_PROT-U.269>-4>          ;
00000002  001E8 ;TPA$MASK
                        U.270:  .LONG   2                               ;
    0000* 001EC ;TPA$TARGET
                        U.271:  .WORD   <<GET_GRP_PRO1-U.271>-2>        ;
    7045  001EE ;TPA$TYPE
                        U.272:  .WORD   28741                           ;
00000000* 001F0 ;TPA$ADDR
                        U.273:  .LONG   <<GROUP_PROT-U.273>-4>          ;
00000004  001F4 ;TPA$MASK
                        U.274:  .LONG   4                               ;
    0000* 001F8 ;TPA$TARGET
                        U.275:  .WORD   <<GET_GRP_PRO1-U.275>-2>        ;
    7044  001FA ;TPA$TYPE
                        U.276:  .WORD   28740                           ;
00000000* 001FC ;TPA$ADDR
                        U.277:  .LONG   <<GROUP_PROT-U.277>-4>          ;
00000008  00200 ;TPA$MASK
                        U.278:  .LONG   8                               ;
    0000* 00204 ;TPA$TARGET
                        U.279:  .WORD   <<GET_GRP_PRO1-U.279>-2>        ;
    7043  00206 ;TPA$TYPE
                        U.280:  .WORD   28739                           ;
00000000* 00208 ;TPA$ADDR
                        U.281:  .LONG   <<GROUP_PROT-U.281>-4>          ;
00000010  0020C ;TPA$MASK
                        U.282:  .LONG   16                              ;
    0000* 00210 ;TPA$TARGET
                        U.283:  .WORD   <<GET_GRP_PRO1-U.283>-2>        ;
    15F6  00212 ;TPA$TYPE
                        U.284:  .WORD   5622                            ;
    0000* 00214 ;TPA$TARGET
                        U.285:  .WORD   <<U.210-U.285>-2>               ;
          00216 ;GET_WOR_PRO
                        U.202:  .BLKB   0
    003A  00216 ;TPA$TYPE
                        U.286:  .WORD   58                              ;
    003D  00218 ;TPA$TYPE
                        U.287:  .WORD   61                              ;
    15F6  0021A ;TPA$TYPE
                        U.288:  .WORD   5622                            ;
    0000* 0021C ;TPA$TARGET
                        U.289:  .WORD   <<U.210-U.289>-2>               ;
          0021E GET_WOR_PRO1:
                        .BLKB   0
    7052  0021E ;TPA$TYPE
                        U.290:  .WORD   28754                           ;
00000000* 00220 ;TPA$ADDR
                        U.291:  .LONG   <<WORLD_PROT-U.291>-4>          ;
00000001  00224 ;TPA$MASK
                        U.292:  .LONG   1                               ;
    0000* 00228 ;TPA$TARGET
                        U.293:  .WORD   <<GET_WOR_PRO1-U.293>-2>        ;
    7057  0022A ;TPA$TYPE
                        U.294:  .WORD   28759                           ;
00000000* 0022C ;TPA$ADDR
                        U.295:  .LONG   <<WORLD_PROT-U.295>-4>          ;
```

```
00000002  00230 ;TPA$MASK
                U.296:  .LONG   2                                       ;
    0000* 00234 ;TPA$TARGET
                U.297:  .WORD   <<GET_WOR_PRO1-U.297>-2>                ;
     7045 00236 ;TPA$TYPE
                U.298:  .WORD   28741                                   ;
00000000* 00238 ;TPA$ADDR
                U.299:  .LONG   <<WORLD_PROT-U.299>-4>                  ;
00000004  0023C ;TPA$MASK
                U.300:  .LONG   4                                       ;
    0000* 00240 ;TPA$TARGET
                U.301:  .WORD   <<GET_WOR_PRO1-U.301>-2>                ;
     7044 00242 ;TPA$TYPE
                U.302:  .WORD   28740                                   ;
00000000* 00244 ;TPA$ADDR
                U.303:  .LONG   <<WORLD_PROT-U.303>-4>                  ;
00000008  00248 ;TPA$MASK
                U.304:  .LONG   8                                       ;
    0000* 0024C ;TPA$TARGET
                U.305:  .WORD   <<GET_WOR_PRO1-U.305>-2>                ;
     7043 0024E ;TPA$TYPE
                U.306:  .WORD   28739                                   ;
00000000* 00250 ;TPA$ADDR
                U.307:  .LONG   <<WORLD_PROT-U.307>-4>                  ;
00000010  00254 ;TPA$MASK
                U.308:  .LONG   16                                      ;
    0000* 00258 ;TPA$TARGET
                U.309:  .WORD   <<GET_WOR_PRO1-U.309>-2>                ;
     15F6 0025A ;TPA$TYPE
                U.310:  .WORD   5622                                    ;
    0000* 0025C ;TPA$TARGET
                U.311:  .WORD   <<U.210-U.311>-2>                       ;
          0025E ;CHK_END_PRO
                U.210:  .BLKB   0
     102C 0025E ;TPA$TYPE
                U.312:  .WORD   4140                                    ;
    0000* 00260 ;TPA$TARGET
                U.313:  .WORD   <<GET_PROT_CLASS-U.313>-2>              ;
     1429 00262 ;TPA$TYPE
                U.314:  .WORD   5161                                    ;
    0000* 00264 ;TPA$TARGET
                U.315:  .WORD   <<U.73-U.315>-2>                        ;
          00266 ;GET_STRING
                U.91:   .BLKB   0
     102C 00266 ;TPA$TYPE
                U.316:  .WORD   4140                                    ;
     FFFE 00268 ;TPA$TARGET
                U.317:  .WORD   -2                                      ;
     1029 0026A ;TPA$TYPE
                U.318:  .WORD   4137                                    ;
     FFFE 0026C ;TPA$TARGET
                U.319:  .WORD   -2                                      ;
     11F7 0026E ;TPA$TYPE
                U.320:  .WORD   4599                                    ;
     FFFE 00270 ;TPA$TARGET
                U.321:  .WORD   -2                                      ;
     0DF8 00272 ;TPA$TYPE
```

```
                        U.322:  .WORD   3576                                    ;
0000*  00274            ;TPA$SUBEXP
                        U.324:  .WORD   <<U.323-U.324>-2>                       ;
       00276            ;GET_STRING1
                        U.323:  .BLKB   0
19F8   00276            ;TPA$TYPE
                        U.325:  .WORD   6648                                    ;
0000*  00278            ;TPA$SUBEXP
                        U.327:  .WORD   <<U.326-U.327>-2>                       ;
0000*  0027A            ;TPA$TARGET
                        U.328:  .WORD   <<U.323-U.328>-2>                       ;
15F6   0027C            ;TPA$TYPE
                        U.329:  .WORD   5622                                    ;
FFFF   0027E            ;TPA$TARGET
                        U.330:  .WORD   -1                                      ;
       00280            ;CHK_DELIM
                        U.326:  .BLKB   0
102B   00280            ;TPA$TYPE
                        U.331:  .WORD   4139                                    ;
FFFE   00282            ;TPA$TARGET
                        U.332:  .WORD   -2                                      ;
102C   00284            ;TPA$TYPE
                        U.333:  .WORD   4140                                    ;
FFFE   00286            ;TPA$TARGET
                        U.334:  .WORD   -2                                      ;
1029   00288            ;TPA$TYPE
                        U.335:  .WORD   4137                                    ;
FFFE   0028A            ;TPA$TARGET
                        U.336:  .WORD   -2                                      ;
11F7   0028C            ;TPA$TYPE
                        U.337:  .WORD   4599                                    ;
FFFE   0028E            ;TPA$TARGET
                        U.338:  .WORD   -2                                      ;
15ED   00290            ;TPA$TYPE
                        U.339:  .WORD   5613                                    ;
FFFF   00292            ;TPA$TARGET
                        U.340:  .WORD   -1                                      ;
       00294            ;CHK_FOR_END
                        U.73:   .BLKB   0
15F7   00294            ;TPA$TYPE
                        U.341:  .WORD   5623                                    ;
FFFF   00296            ;TPA$TARGET
                        U.342:  .WORD   -1                                      ;

                                .PSECT  _LIB$KEY0$,NOWRT,  SHR,  PIC,1

       00000 ACE_KEY::
                                .BLKB   0
       00000            ;TPA$KEY0
                        U.1:    .BLKB   0
0000*  00000            ;TPA$KEY
                        U.4:    .WORD   <U.3-U.1>                               ;
0000*  00002            ;TPA$KEY
                        U.12:   .WORD   <U.11-U.1>                              ;
0000*  00004            ;TPA$KEY
                        U.20:   .WORD   <U.19-U.1>                              ;
0000*  00006            ;TPA$KEY
```

```
                        U.27:   .WORD   <U.26-U.1>                      ;
0000* 00008             ;TPA$KEY
                        U.34:   .WORD   <U.33-U.1>                      ;
0000* 0000A             ;TPA$KEY
                        U.42:   .WORD   <U.41-U.1>                      ;
0000* 0000C             ;TPA$KEY
                        U.50:   .WORD   <U.49-U.1>                      ;
0000* 0000E             ;TPA$KEY
                        U.56:   .WORD   <U.55-U.1>                      ;
0000* 00010             ;TPA$KEY
                        U.62:   .WORD   <U.61-U.1>                      ;
0000* 00012             ;TPA$KEY
                        U.117:  .WORD   <U.116-U.1>                     ;
0000* 00014             ;TPA$KEY
                        U.123:  .WORD   <U.122-U.1>                     ;
0000* 00016             ;TPA$KEY
                        U.129:  .WORD   <U.128-U.1>                     ;
0000* 00018             ;TPA$KEY
                        U.145:  .WORD   <U.144-U.1>                     ;
0000* 0001A             ;TPA$KEY
                        U.151:  .WORD   <U.150-U.1>                     ;
0000* 0001C             ;TPA$KEY
                        U.157:  .WORD   <U.156-U.1>                     ;
0000* 0001E             ;TPA$KEY
                        U.163:  .WORD   <U.162-U.1>                     ;
0000* 00020             ;TPA$KEY
                        U.169:  .WORD   <U.168-U.1>                     ;
0000* 00022             ;TPA$KEY
                        U.181:  .WORD   <U.180-U.1>                     ;
0000* 00024             ;TPA$KEY
                        U.187:  .WORD   <U.186-U.1>                     ;
0000* 00026             ;TPA$KEY
                        U.193:  .WORD   <U.192-U.1>                     ;
0000* 00028             ;TPA$KEY
                        U.199:  .WORD   <U.198-U.1>                     ;

                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                44  41  45  52  00000 P.AAC:  .ASCII  \READ\             ;
                  00000004      00004 P.AAB:  .LONG   4                 ;
                  00000000'     00008         .ADDRESS P.AAC            ;
            45  54  49  52  57  0000C P.AAE:  .ASCII  \WRITE\            ;
                                00011         .BLKB   3                 ;
                  00000005      00014 P.AAD:  .LONG   5                 ;
                  00000000'     00018         .ADDRESS P.AAE            ;
45  54  55  43  45  58  45      0001C P.AAG:  .ASCII  \EXECUTE\           ;
                                00023         .BLKB   1                 ;
                  00000007      00024 P.AAF:  .LONG   7                 ;
                  00000000'     00028         .ADDRESS P.AAG            ;
    45  54  45  4C  45  44      0002C P.AAI:  .ASCII  \DELETE\            ;
                                00032         .BLKB   2                 ;
                  00000006      00034 P.AAH:  .LONG   6                 ;
                  00000000'     00038         .ADDRESS P.AAI            ;
4C  4F  52  54  4E  4F  43      0003C P.AAK:  .ASCII  \CONTROL\           ;
                                00043         .BLKB   1                 ;
                  00000007      00044 P.AAJ:  .LONG   7                 ;
                  00000000'     00048         .ADDRESS P.AAK            ;
```

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                                35  5F  54  49  42  0004C P.AAM:  .ASCII  \BIT_5\
                                                    00051        .BLKB   3
                                  00000005          00054 P.AAL: .LONG   5
                                  00000000'         00058        .ADDRESS P.AAM
                                36  5F  54  49  42  0005C P.AAO:  .ASCII  \BIT_6\
                                                    00061        .BLKB   3
                                  00000005          00064 P.AAN: .LONG   5
                                  00000000'         00068        .ADDRESS P.AAO
                                37  5F  54  49  42  0006C P.AAQ:  .ASCII  \BIT_7\
                                                    00071        .BLKB   3
                                  00000005          00074 P.AAP: .LONG   5
                                  00000000'         00078        .ADDRESS P.AAQ
                                38  5F  54  49  42  0007C P.AAS:  .ASCII  \BIT_8\
                                                    00081        .BLKB   3
                                  00000005          00084 P.AAR: .LONG   5
                                  00000000'         00088        .ADDRESS P.AAS
                                39  5F  54  49  42  0008C P.AAU:  .ASCII  \BIT_9\
                                                    00091        .BLKB   3
                                  00000005          00094 P.AAT: .LONG   5
                                  00000000'         00098        .ADDRESS P.AAU
                            30  31  5F  54  49  42  0009C P.AAW:  .ASCII  \BIT_10\
                                                    000A2        .BLKB   2
                                  00000006          000A4 P.AAV: .LONG   6
                                  00000000'         000A8        .ADDRESS P.AAW
                            31  31  5F  54  49  42  000AC P.AAY:  .ASCII  \BIT_11\
                                                    000B2        .BLKB   2
                                  00000006          000B4 P.AAX: .LONG   6
                                  00000000'         000B8        .ADDRESS P.AAY
                            32  31  5F  54  49  42  000BC P.ABA:  .ASCII  \BIT_12\
                                                    000C2        .BLKB   2
                                  00000006          000C4 P.AAZ: .LONG   6
                                  00000000'         000C8        .ADDRESS P.ABA
                            33  31  5F  54  49  42  000CC P.ABC:  .ASCII  \BIT_13\
                                                    000D2        .BLKB   2
                                  00000006          000D4 P.ABB: .LONG   6
                                  00000000'         000D8        .ADDRESS P.ABC
                            34  31  5F  54  49  42  000DC P.ABE:  .ASCII  \BIT_14\
                                                    000E2        .BLKB   2
                                  00000006          000E4 P.ABD: .LONG   6
                                  00000000'         000E8        .ADDRESS P.ABE
                            35  31  5F  54  49  42  000EC P.ABG:  .ASCII  \BIT_15\
                                                    000F2        .BLKB   2
                                  00000006          000F4 P.ABF: .LONG   6
                                  00000000'         000F8        .ADDRESS P.ABG
                            36  31  5F  54  49  42  000FC P.ABI:  .ASCII  \BIT_16\
                                                    00102        .BLKB   2
                                  00000006          00104 P.ABH: .LONG   6
                                  00000000'         00108        .ADDRESS P.ABI
                            37  31  5F  54  49  42  0010C P.ABK:  .ASCII  \BIT_17\
                                                    00112        .BLKB   2
                                  00000006          00114 P.ABJ: .LONG   6
                                  00000000'         00118        .ADDRESS P.ABK
                            38  31  5F  54  49  42  0011C P.ABM:  .ASCII  \BIT_18\
                                                    00122        .BLKB   2
                                  00000006          00124 P.ABL: .LONG   6
                                  00000000'         00128        .ADDRESS P.ABM
                            39  31  5F  54  49  42  0012C P.ABO:  .ASCII  \BIT_19\
```

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                                00132                   .BLKB   2
                    00000006    00134 P.ABN:            .LONG   6
                    00000000'   00138                   .ADDRESS P.ABO
                30  32  5F  54  49  42  0013C P.ABQ:    .ASCII  \BIT_20\
                                00142                   .BLKB   2
                    00000006    00144 P.ABP:            .LONG   6
                    00000000'   00148                   .ADDRESS P.ABQ
                31  32  5F  54  49  42  0014C P.ABS:    .ASCII  \BIT_21\
                                00152                   .BLKB   2
                    00000006    00154 P.ABR:            .LONG   6
                    00000000'   00158                   .ADDRESS P.ABS
                32  32  5F  54  49  42  0015C P.ABU:    .ASCII  \BIT_22\
                                00162                   .BLKB   2
                    00000006    00164 P.ABT:            .LONG   6
                    00000000'   00168                   .ADDRESS P.ABU
                33  32  5F  54  49  42  0016C P.ABW:    .ASCII  \BIT_23\
                                00172                   .BLKB   2
                    00000006    00174 P.ABV:            .LONG   6
                    00000000'   00178                   .ADDRESS P.ABW
                34  32  5F  54  49  42  0017C P.ABY:    .ASCII  \BIT_24\
                                00182                   .BLKB   2
                    00000006    00184 P.ABX:            .LONG   6
                    00000000'   00188                   .ADDRESS P.ABY
                35  32  5F  54  49  42  0018C P.ACA:    .ASCII  \BIT_25\
                                00192                   .BLKB   2
                    00000006    00194 P.ABZ:            .LONG   6
                    00000000'   00198                   .ADDRESS P.ACA
                36  32  5F  54  49  42  0019C P.ACC:    .ASCII  \BIT_26\
                                001A2                   .BLKB   2
                    00000006    001A4 P.ACB:            .LONG   6
                    00000000'   001A8                   .ADDRESS P.ACC
                37  32  5F  54  49  42  001AC P.ACE:    .ASCII  \BIT_27\
                                001B2                   .BLKB   2
                    00000006    001B4 P.ACD:            .LONG   6
                    00000000'   001B8                   .ADDRESS P.ACE
                38  32  5F  54  49  42  001BC P.ACG:    .ASCII  \BIT_28\
                                001C2                   .BLKB   2
                    00000006    001C4 P.ACF:            .LONG   6
                    00000000'   001C8                   .ADDRESS P.ACG
                39  32  5F  54  49  42  001CC P.ACI:    .ASCII  \BIT_29\
                                001D2                   .BLKB   2
                    00000006    001D4 P.ACH:            .LONG   6
                    00000000'   001D8                   .ADDRESS P.ACI
                30  33  5F  54  49  42  001DC P.ACK:    .ASCII  \BIT_30\
                                001E2                   .BLKB   2
                    00000006    001E4 P.ACJ:            .LONG   6
                    00000000'   001E8                   .ADDRESS P.ACK
                31  33  5F  54  49  42  001EC P.ACM:    .ASCII  \BIT_31\
                                001F2                   .BLKB   2
                    00000006    001F4 P.ACL:            .LONG   6
                    00000000'   001F8                   .ADDRESS P.ACM
00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 001FC P.AAA:    .ADDRESS P.AAB, P.AAD, P.AAF, P.AAH, P.AAJ, -
00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 00214                   P.AAL, P.AAN, P.AAP, P.AAR, P.AAT, P.AAV, -
00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 0022C                   P.AAX, P.AAZ, P.ABB, P.ABD, P.ABF, P.ABH, -
00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 00244                   P.ABJ, P.ABL, P.ABN, P.ABP, P.ABR, P.ABT, -
00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 0025C                   P.ABV, P.ABX, P.ABZ, P.ACB, P.ACD, P.ACF, -
                                00000000' 00000000' 00274                           P.ACH, P.ACJ, P.ACL
```

```
                          4B  43  4F  4C  24  4C  43  41  0027C P.ACP:   .ASCII  \ACL$LOCK\
                                                  00000008  00284 P.ACO:   .LONG   8
                                                  00000000' 00288          .ADDRESS P.ACP
                          5F  4C  49  46  24  4C  43  41  0028C P.ACR:   .ASCII  \ACL$FIL_\
                                                  00000008  00294 P.ACQ:   .LONG   8
                                                  00000000' 00298          .ADDRESS P.ACR
                          5F  56  45  44  24  4C  43  41  0029C P.ACT:   .ASCII  \ACL$DEV_\
                                                  00000008  002A4 P.ACS:   .LONG   8
                                                  00000000' 002A8          .ADDRESS P.ACT
                          5F  43  42  4A  24  4C  43  41  002AC P.ACV:   .ASCII  \ACL$JBC_\
                                                  00000008  002B4 P.ACU:   .LONG   8
                                                  00000000' 002B8          .ADDRESS P.ACV
                          5F  46  45  43  24  4C  43  41  002BC P.ACX:   .ASCII  \ACL$CEF_\
                                                  00000008  002C4 P.ACW:   .LONG   8
                                                  00000000' 002C8          .ADDRESS P.ACX
                          5F  54  4E  4C  24  4C  43  41  002CC P.ACZ:   .ASCII  \ACL$LNT_\
                                                  00000008  002D4 P.ACY:   .LONG   8
                                                  00000000' 002D8          .ADDRESS P.ACZ
                          5F  43  52  50  24  4C  43  41  002DC P.ADB:   .ASCII  \ACL$PRC_\
                                                  00000008  002E4 P.ADA:   .LONG   8
                                                  00000000' 002E8          .ADDRESS P.ADB
                          5F  4C  42  47  24  4C  43  41  002EC P.ADD:   .ASCII  \ACL$GBL_\
                                                  00000008  002F4 P.ADC:   .LONG   8
                                                  00000000' 002F8          .ADDRESS P.ADD
00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 002FC P.ACN:   .ADDRESS P.ACO, P.ACQ, P.ACS, P.ACU, P.ACW, -
                                                  00000000' 00000000' 00314          P.ACY, P.ADA, P.ADC
                          59  54  49  52  55  43  45  53  0031C P.ADE:   .ASCII  \SECURITY\

                                                                         .PSECT  $OWN$,NOEXE,2

                                                  00  00000 JOURNAL_ACES:
                                                                .BYTE   0
                                                      00001     .BLKB   3
                                                      00004 ACE_BUFFER:
                                                                .BLKB   512
                                                      00204 ACE_INDEX:
                                                                .BLKB   4
                                                      00208 ACE_TYPE:
                                                                .BLKB   4
                                                      0020C ACE_RIGHTS:
                                                                .BLKB   4
                                                      00210 UIC_FLAGS:
                                                                .BLKB   4
                                                      00214 UIC_COUNT:
                                                                .BLKB   4
                                                      00218 IDENTIFIER:
                                                                .BLKB   4
                                                      0021C ID_NAME:  .BLKB   8
                                                      00224 ID_COUNT:
                                                                .BLKB   4
                                                      00228 JOURNAL_NAME:
                                                                .BLKB   8
                                                      00230 ACCESS_FLAGS:
                                                                .BLKB   4
                                                      00234 SYSTEM_PROT:
                                                                .BLKB   4
                                                      00238 OWNER_PROT:
```

```
                                                .BLKB   4
0023C GROUP_PROT:
                                                .BLKB   4
00240 WORLD_PROT:
                                                .BLKB   4
00244 BIT_NAME_TABLE:
                                                .BLKB   4
00248 CHANGE_ACMODE:
                                                .BLKB   4
0024C CALL_ACMODE:
                                                .BLKB   4
00250 PARENT_ID:
                                                .BLKB   4
00254 ACL_QUEUE_HEAD:
                                                .BLKB   4
00258 ACL_POINTER:
                                                .BLKB   4
0025C ACL_SPLIT:
                                                .BLKB   4
00260 ACE_POINTER:
                                                .BLKB   4
00264 ACE_NUMBER:
                                                .BLKB   4
00268 ACL_AREA:
                                                .BLKB   512
00468 ACL_CONTEXT:
                                                .BLKB   4
0046C LOCK_RESNAM:
                                                .BLKB   8
00474 RESNAM_TEXT:
                                                .BLKB   31

                                        DEFAULT_BITS=       P.AAA
                                        LOCK_PREFIX=        P.ACN
                                                .EXTRN  ACL_ADDENTRY, ACL_DELENTRY
                                                .EXTRN  ACL_MODENTRY, ACL_FINDENTRY
                                                .EXTRN  ACL_FINDTYPE, ACL_DELETEACL
                                                .EXTRN  ACL_READACL, ACL_ACLLENGTH
                                                .EXTRN  ACL_READACE, ACL_LOCATEACE
                                                .EXTRN  ACL_INIT_QUEUE, ALLOC_PAGED
                                                .EXTRN  DALLOC_PAGED, LIB$TPARSE
                                                .EXTRN  LIB$FID_TO_NAME
                                                .EXTRN  LIB$GET_VM, LIB$FREE_VM
                                                .EXTRN  EXE$PROBER, EXE$PROBEW
                                                .EXTRN  IOC$VERIFYCHAN, SCH$LOCKR
                                                .EXTRN  SCH$LOCKW, SCH$UNLOCK
                                                .EXTRN  CTL$GL_PCB, LIB$_SYNTAXERR

                                                .PSECT  $CODE$,NOWRT,2

                                  007C 00000    .ENTRY  SYS$PARSE_ACL, Save R2,R3,R4,R5,R6      ; 0616
                 56 00000000'   EF   9E 00002   MOVAB   JOURNAL_NAME, R6                        ;
                 5E             24   C2 00009   SUBL2   #36, SP                                ;
                          1C    A6   D4 0000C   CLRL    BIT_NAME_TABLE                          ; 0676
                 50       10   AC   D0 0000F   MOVL    BIT_TABLE, R0                           ; 0677
                               0C   13 00013   BEQL    1$                                      ;
     60    0100  8F           00   0C 00015   PROBER  #0, #256, (R0)                           ; 0678
```

```
                                                5B  13  00013          BEQL    2$                                                      ;
                                          1C    A6                   50  D0  00018          MOVL    R0, BIT_NAME_TABLE                      ; 0679
    0200    8F                  00              6E                   00  2C  00021  1$:     MOVC5   #0, (SP), #0, #512, ACE_BUFFER          ; 0684
                                                                FDDC    C6      00028                                                      ;
                                                                  E0    A6  7C  00023          CLRQ    ACE_TYPE                        ; 0685
                                                                  DC    A6  D4  0002E          CLRL    ACE_INDEX                       ;
                                                                  E8    A6  7C  00031          CLRQ    UIC_FLAGS                       ; 0686
                                                                  FC    A6  D4  00034          CLRL    ID_COUNT                        ; 0687
                                                                  F4    A6  B4  00037          CLRW    ID_NAME                         ; 0689
                                                                  66    B4  0003A          CLRW    JOURNAL_NAME                    ;
                                                                  14    A6  7C  0003C          CLRQ    GROUP_PROT                      ; 0690
                                                                  10    A6  D4  0003F          CLRL    OWNER_PROT                      ;
                                                                  08    A6  7C  00042          CLRQ    ACCESS_FLAGS                    ; 0688
                                          24                  00              6E                   00  2C  00045          MOVC5   #0, (SP), #0, #36, TPARSE_BLOCK         ; 0692
                                                                                                   6E      0004A                          ;
                                                                              6E                   08  D0  0004B          MOVL    #8, TPARSE_BLOCK                ; 0693
                                                                        04    AE                   02  88  0004E          BISB2   #2, TPARSE_BLOCK+4              ; 0694
                                                                              54          04       AC  D0  00052          MOVL    ACL_STRING, R4                  ; 0695
                                                                  64          08                   00  0C  00056          PROBER  #0, #8, (R4)                    ;
                                                                                                   1C  13  0005A          BEQL    2$                              ;
                                                                              50                   64  3C  0005C          MOVZWL  (R4), R0                        ; 0698
                                                                        08    AE                   50  D0  0005F          MOVL    R0, TPARSE_BLOCK+8              ;
                                                                              55                   50  D0  00063          MOVL    R0, ACL_STRING_LEN              ;
                                                                              50          04       A4  D0  00066          MOVL    4(R4), R0                       ; 0699
                                                                              51                   55  D0  0006A          MOVL    ACL_STRING_LEN, R1              ;
                                                                                                   53  D4  0006D          CLRL    R3                              ;
                                                                        00000000G                  00  16  0006F          JSB     EXE$PROBER                      ;
                                                                              03                   50  E8  00075          BLBS    R0, 3$                          ;
                                                                                             017E  31  00078  2$:     BRW     17$                             ;
                                                                        0C    AE                04    A4  D0  0007B  3$:     MOVL    4(R4), TPARSE_BLOCK+12          ; 0700
                                                                                    00000000'     EF  9F  00080          PUSHAB  ACE_KEY                         ; 0705
                                                                                    00000000'     EF  9F  00086          PUSHAB  ACE_STATE                       ;
                                                                                          08      AE  9F  0008C          PUSHAB  TPARSE_BLOCK                    ;
                                                                              00000000G   00            03  FB  0008F          CALLS   #3, LIB$TPARSE                  ;
                                                                                          51          0C    AC  D0  00096          MOVL    ERROR_POSITION, R1              ; 0709
                                                                                                      0B  13  0009A          BEQL    4$                              ;
                                                                  61                      02              00  0D  0009C          PROBEW  #0, #2, (R1)                    ; 0710
                                                                                                      D6  13  000A0          BEQL    2$                              ;
                                                                  61                      55          08    AE  A3  000A2          SUBW3   TPARSE_BLOCK+8, ACL_STRING_LEN, (R1)    ; 0712
                                                                              00000000G   8F                50  D1  000A7  4$:     CMPL    STATUS, #LIB$_SYNTAXERR         ; 0718
                                                                                                            44  13  000AE          BEQL    8$                              ;
                                                                                                      E0    A6  D5  000B0          TSTL    ACE_TYPE                        ; 0719
                                                                                                            3F  13  000B3          BEQL    8$                              ;
                                                                                          05                50  E9  000B5          BLBC    STATUS, 5$                      ; 0720
                                                                                                      08    AE  D5  000B8          TSTL    TPARSE_BLOCK+8                  ;
                                                                                                            37  14  000BB          BGTR    8$                              ;
                                                                                          01                50  E8  000BD  5$:     BLBS    STATUS, 6$                      ; 0723
                                                                                                                04  000C0          RET                                     ;
                                                                                    FDDD    C6        E0    A6  90  000C1  6$:     MOVB    ACE_TYPE, ACE_BUFFER+1          ; 0727
                                                                                          50        FDDE    C6  3C  000C7          MOVZWL  ACE_BUFFER+2, R0                ; 0729
                                                                                          50          E8    A6  C8  000CC          BISL2   UIC_FLAGS, R0                   ;
                                                                        FDDE    C6                50          08    A6  A9  000D0          BISW3   ACCESS_FLAGS, R0, ACE_BUFFER+2  ; 0730
                                                                                    FDE0    C6              E4    A6  D0  000D7          MOVL    ACE_RIGHTS, ACE_BUFFER+4        ; 0731
                                                                              08                01          E0    A6  CF  000DD          CASEL   ACE_TYPE, #1, #8                ; 0736
                                                0039                0039                0039        0015        000E2  7$:     .WORD   9$-7$,-                         ;
                                                009F                009F                0061        0061        000EA          .WORD   10$-7$,-                        ;
                                                                                                    008C        000F2          .WORD   10$-7$,-                        ;
```

```
                                                                    10$-7$,-
                                                                    11$-7$,-
                                                                    11$-7$,-
                                                                    14$-7$,-
                                                                    14$-7$,-
                                                                    13$-7$
                                    008A  31 000F4 8$:      BRW     14$                                                     ; 0799
                                      08  A6 D5 000F7 9$:    TSTL    ACCESS_FLAGS                                            ; 0740
                                          F8 12 000FA       BNEQ    8$
                                          66 B5 000FC       TSTW    JOURNAL_NAME                                            ; 0741
                                          F4 12 000FE       BNEQ    8$
                                    01    EC A6 D1 00100    CMPL    UIC_COUNT, #1                                           ; 0742
                                          7B 14 00104       BGTR    14$
                                      DC  A6 D5 00106       TSTL    ACE_INDEX                                               ; 0743
                                          76 13 00109       BEQL    14$
                                    50    DC A6 D0 0010B    MOVL    ACE_INDEX, R0                                           ; 0745
                                51  50      02 78 0010F    ASHL    #2, R0, R1
                            FDDC    C6    51    08 81 00113 ADDB3   #8, R1, ACE_BUFFER
                                          51 11 00119       BRB     12$                                                     ; 0736
                                    61  FDD8  C6 E9 0011B 10$:    BLBC    JOURNAL_ACES, 14$                               ; 0751
                                      EC  A6 D5 00120       TSTL    UIC_COUNT                                               ; 0752
                                          5C 12 00123       BNEQ    14$
                                      FC  A6 D5 00125       TSTL    ID_COUNT                                                ; 0753
                                          57 12 00128       BNEQ    14$
                                      08  A6 D5 0012A       TSTL    ACCESS_FLAGS                                            ; 0754
                                          52 12 0012D       BNEQ    14$
                                      E4  A6 D5 0012F       TSTL    ACE_RIGHTS                                              ; 0755
                                          4D 12 00132       BNEQ    14$
                            FDE0    C6  04  B6    66 28 00134 MOVC3   JOURNAL_NAME, @JOURNAL_NAME+4, ACE_BUFFER+4            ; 0759
                            FDDC    C6      66    04 81 0013B ADDB3   #4, JOURNAL_NAME, ACE_BUFFER                          ; 0760
                                          29 11 00141       BRB     12$                                                     ; 0736
                                      EC  A6 D5 00143 11$:    TSTL    UIC_COUNT                                               ; 0766
                                          39 12 00146       BNEQ    14$
                                      FC  A6 D5 00148       TSTL    ID_COUNT                                                ; 0767
                                          34 12 0014B       BNEQ    14$
                                    08    66 B1 0014D       CMPW    JOURNAL_NAME, #8                                        ; 0768
                                          2F 12 00150       BNEQ    14$
                66      00 00000000'  EF    08 2D 00152     CMPC5   #8, P.ADE, #0, JOURNAL_NAME, -                          ; 0769
                                      04  B6    0015B                @JOURNAL_NAME+4
                                          22 12 0015D       BNEQ    14$
                        FDE4    C6  04  B6    66 28 0015F MOVC3   JOURNAL_NAME, @JOURNAL_NAME+4, ACE_BUFFER+8             ; 0774
                        FDDC    C6      66    08 81 00166 ADDB3   #8, JOURNAL_NAME, ACE_BUFFER                           ; 0775
                                          56 11 0016C 12$:  BRB     16$                                                     ; 0736
                                      08  A6 D5 0016E 13$:    TSTL    ACCESS_FLAGS                                            ; 0779
                                          0E 12 00171       BNEQ    14$
                                          66 B5 00173       TSTW    JOURNAL_NAME                                            ; 0780
                                          0A 12 00175       BNEQ    14$
                                      EC  A6 D5 00177       TSTL    UIC_COUNT                                               ; 0781
                                          05 12 0017A       BNEQ    14$
                                      FC  A6 D5 0017C       TSTL    ID_COUNT                                                ; 0782
                                          06 13 0017F       BEQL    15$
                                    50    21E4 8F 3C 00181 14$:   MOVZWL  #8676, R0                                       ; 0783
                                          04 00186          RET
                                  0C  A6  0C  A6 D2 00187 15$:    MCOML   SYSTEM_PROT, SYSTEM_PROT                        ; 0784
                0C  A6      1B        05    00 F0 0018C       INSV    #0, #5, #27, SYSTEM_PROT                            ; 0785
                                  10  A6  10  A6 D2 00192      MCOML   OWNER_PROT, OWNER_PROT                              ; 0787
                10  A6      1B        05    00 F0 00197       INSV    #0, #5, #27, OWNER_PROT                             ; 0788
```

```
                                FDE4   C6        0C   A6   7D 0019D          MOVQ    SYSTEM_PROT, ACE_BUFFER+8          ; 0786
                                  14   A6        14   A6   D2 001A3          MCOML   GROUP_PROT, GROUP_PROT             ; 0790
      14   A6                             1B        05   00   F0 001A8          INSV    #0, #5, #27, GROUP_PROT            ; 0791
                                    18   A6        18   A6   D2 001AE          MCOML   WORLD_PROT, WORLD_PROT           ; 0793
      18   A6                             1B        05   00   F0 001B3          INSV    #0, #5, #27, WORLD_PROT            ; 0794
                                FDEC   C6        14   A6   7D 001B9          MOVQ    GROUP_PROT, ACE_BUFFER+16          ; 0792
                                FDDC   C6        18   90 001BF              MOVB    #24, ACE_BUFFER                    ; 0796
                                       54        08   AC   D0 001C4 16$:     MOVL    ACL_ENTRY, R4                      ; 0804
                                64             08   00   0C 001C8          PROBER  #0, #8, (R4)                       ;
                                               2B   13 001CC              BEQL    17$                                ;
                                       51        64   3C 001CE          MOVZWL  (R4), ACL_ENTRY_LEN                ; 0807
           51      FDDC   C6             08   00   ED 001D1          CMPZV   #0, #8, ACE_BUFFER, ACL_ENTRY_LEN  ; 0808
                                               1F   1A 001D8              BGTRU   17$                                ;
                                       50        04   A4   D0 001DA          MOVL    4(R4), R0                          ; 0809
                                       53        D4 001DE                   CLRL    R3                                 ;
                                  00000000G      00   16 001E0              JSB     EXE$PROBEW                         ;
                                       10        50   E9 001E6              BLBC    R0, 17$                            ;
                                       50   FDDC   C6   9A 001E9          MOVZBL  ACE_BUFFER, R0                     ; 0810
           64             00   FDDC   C6             50   2C 001EE          MOVC5   R0, ACE_BUFFER, #0, (R4), @4(R4)   ; 0811
                                             04   B4        001F5                                                     ;
                                               04   11 001F7              BRB     18$                                ; 0810
                                       50             0C   D0 001F9 17$:     MOVL    #12, R0                            ; 0814
                                                      04 001FC                   RET                                ;
                                       50             01   D0 001FD 18$:     MOVL    #1, R0                             ; 0816
                                                      04 00200                   RET                                ; 0818

; Routine Size:  513 bytes,    Routine Base:  $CODE$ + 0000
```

```
;  823          0819  1 %SBTTL  '$FORMAT_ACL system service'
;  824          0820  1 GLOBAL ROUTINE SYS$FORMAT_ACL (ACL_ENTRY, ACL_LENGTH, ACL_STRING,
;  825          0821  1                               LINE_WIDTH, TERM_DESC, LINE_INDENT,
;  826          0822  1                               BIT_TABLE) =
;  827          0823  1
;  828          0824  1 !++
;  829          0825  1 !
;  830          0826  1 ! FUNCTIONAL DESCRIPTION:
;  831          0827  1 !
;  832          0828  1 !       This routine converts the Access Control Entry from a binary form
;  833          0829  1 !       to a text form.
;  834          0830  1 !
;  835          0831  1 ! CALLING SEQUENCE:
;  836          0832  1 !       SYS$FORMAT_ACL (ARG1, ARG2, ARG3, ARG4, ARG5, ARG6, ARG7)
;  837          0833  1 !
;  838          0834  1 ! INPUT PARAMETERS:
;  839          0835  1 !       ARG1: address of the input buffer descriptor
;  840          0836  1 !       ARG4: address of the maximum line width for formatting
;  841          0837  1 !       ARG5: address of the output line segment terminator descriptor
;  842          0838  1 !       ARG6: address of the number of columns to indent each line segment
;  843          0839  1 !       ARG7: address of an access bit name table
;  844          0840  1 !
;  845          0841  1 ! IMPLICIT INPUTS:
;  846          0842  1 !       none
;  847          0843  1 !
;  848          0844  1 ! OUTPUT PARAMETERS:
;  849          0845  1 !       ARG2: address of a word to get the length of the formatted ACE
;  850          0846  1 !       ARG3: address of the output text buffer descriptor
;  851          0847  1 !
;  852          0848  1 ! IMPLICIT OUTPUTS:
;  853          0849  1 !       none
;  854          0850  1 !
;  855          0851  1 ! ROUTINE VALUE:
;  856          0852  1 !       SS$_NORMAL:     The conversion was successful.
;  857          0853  1 !       SS$_NOSUCHID:   The identifier specified in the ACE is not in the
;  858          0854  1 !                       rights database.
;  859          0855  1 !       SS$_BUFFEROVF:  The conversion was successful.  The formatted ACE
;  860          0856  1 !                       has overflowed the output buffer and has been
;  861          0857  1 !                       truncated.
;  862          0858  1 !
;  863          0859  1 ! SIDE EFFECTS:
;  864          0860  1 !       none
;  865          0861  1 !
;  866          0862  1 !--
;  867          0863  1
;  868          0864  2 BEGIN
;  869          0865  2
;  870        M 0866  2 MACRO   CHECK_WIDTH (TEST_WIDTH) =
;  871        M 0867  2                 BEGIN
;  872        M 0868  2                 IF .WIDTH GTRU 0
;  873        M 0869  2                 AND .LINE_SIZE + TEST_WIDTH GTRU .WIDTH
;  874        M 0870  2                 THEN
;  875        M 0871  2                     BEGIN
;  876        M 0872  2                     IF .TERM_LENGTH GTR 0
;  877        M 0873  2                     THEN
;  878        M 0874  2                         BEGIN
;  879        M 0875  2                         CH$MOVE (.TERM_LENGTH, .TERM_POINTER, BUFFER[.SIZE]);
```

```
;  880        M 0876  2                        SIZE = .SIZE + .TERM_DESC[DSC$W_LENGTH];
;  881        M 0877  2                        END;
;  882        M 0878  2                    CH$FILL (%C' ', .INDENT, BUFFER[.SIZE]);
;  883        M 0879  2                    SIZE = .SIZE + .INDENT;
;  884        M 0880  2                    LINE_SIZE = .INDENT;
;  885        M 0881  2                    END;
;  886        M 0882  2                LINE_SIZE = .LINE_SIZE + TEST_WIDTH;
;  887        M 0883  2                END
;  888          0884  2                %,
;  889          0885  2
;  890        M 0886  2        STORE_TEXT (STRING) =
;  891        M 0887  2                BEGIN
;  892        M 0888  2                CHECK_WIDTH (%CHARCOUNT (STRING));
;  893        M 0889  2                CH$MOVE (%CHARCOUNT (STRING), UPLIT (STRING), BUFFER[.SIZE]);
;  894        M 0890  2                SIZE = .SIZE + %CHARCOUNT (STRING);
;  895        M 0891  2                END
;  896          0892  2                %,
;  897          0893  2
;  898        M 0894  2        NEW_LINE =
;  899        M 0895  2                BEGIN
;  900        M 0896  2                IF .TERM_LENGTH GTR 0
;  901        M 0897  2                THEN
;  902        M 0898  2                    BEGIN
;  903        M 0899  2                    CH$MOVE (.TERM_LENGTH, .TERM_POINTER, BUFFER[.SIZE]);
;  904        M 0900  2                    SIZE = .SIZE + .TERM_LENGTH;
;  905        M 0901  2                    END;
;  906        M 0902  2                CH$FILL (%C' ', .INDENT, BUFFER[.SIZE]);
;  907        M 0903  2                SIZE = .SIZE + .INDENT;
;  908        M 0904  2                LINE_SIZE = .INDENT;
;  909        M 0905  2                END
;  910          0906  2                %;
;  911          0907  2
;  912          0908  2 MAP
;  913          0909  2         ACL_ENTRY       : REF $BBLOCK,          ! Address of the input descriptor
;  914          0910  2         ACL_STRING      : REF $BBLOCK,          ! Address of the output descriptor
;  915          0911  2         TERM_DESC       : REF $BBLOCK;          ! Segment terminator descriptor
;  916          0912  2
;  917          0913  2 LITERAL
;  918          0914  2         MAX_FAO_LENGTH  = MAXU (2 * KGB$S_NAME + 3,     ! Max size of
;  919          0915  2                                 ATR$S_FILE_SPEC),       !   FAO buffer
;  920          0916  2         MAX_FMT_ACE     = 3072,                 ! Largest possible formatted ACE
;  921          0917  2         VOLNAM_SIZE     = %CHARCOUNT ('DISK$') + ACE$S_VOLNAM + 1;
;  922          0918  2                                                 ! Size of full volume name
;  923          0919  2
;  924          0920  2 LOCAL
;  925          0921  2         ACL_ENTRY_LEN,                          ! Length of input ACE buffer
;  926          0922  2         LOCAL_ACE       : $BBLOCK [ATR$S_ADDACLENT],    ! Local copy of ACE
;  927          0923  2         FAO_DESCR       : $BBLOCK [DSC$C_S_BLN],        ! FAO output descriptor
;  928          0924  2         KEY_IDENTIFIER  : $BBLOCK [4],          ! Key identifier
;  929          0925  2         PROT_VALUE,                             ! Protection value from ACE
;  930          0926  2         PROT_FIELD_DSC  : REF $BBLOCK,          ! Addr of protection field name
;  931          0927  2         PROT_BUF        : VECTOR [32,BYTE],     ! Storage for ASCII protection string
;  932          0928  2         PROT_IDX,                               ! Index into protection string
;  933          0929  2         BUFFER          : VECTOR [MAX_FMT_ACE, BYTE],
;  934          0930  2                                                 ! Temp storage for formatted ACE
;  935          0931  2         LINE_SIZE,                              ! Size of the current segment
;  936          0932  2         SIZE;                                   ! Size of formatted ACE
```

```
;  937     0933  2          INDENT,                                  ! Number of columns to indent
;  938     0934  2          WIDTH,                                   ! Width of the line
;  939     0935  2          TERM_LENGTH,                             ! Size of terminator string
;  940     0936  2          TERM_POINTER,                            ! Address of terminator string
;  941     0937  2          FAO_DESC        : $BBLOCK [DSC$C_S_BLN],         ! FAO output descriptor
;  942     0938  2          FAO_BUF         : VECTOR [MAX_FAO_LENGTH,BYTE], ! FAO output buffer
;  943     0939  2          BIT_NAME_DESC   : REF $BBLOCK,           ! Descr for access bit name
;  944     0940  2          FLAGS           : BITVECTOR [16],        ! Flags from ACE
;  945     0941  2          ACCESS_MASK     : BYTE,                  ! Access mask in ACE
;  946     0942  2          AUDIT_MASK      : BYTE,                  ! Audit access mask in ACE
;  947     0943  2          VOLNAM_DESC     : $BBLOCK [DSC$C_S_BLN],         ! Volume name descriptor
;  948     0944  2          VOLNAM_TEXT     : VECTOR [VOLNAM_SIZE, BYTE],    ! Volume name storage
;  949     0945  2          FILENAME_DESC   : $BBLOCK [DSC$C_S_BLN],         ! File name descriptor
;  950     0946  2          FILENAME_TEXT   : VECTOR [ATR$S_FILE_SPEC],      ! File name storage
;  951     0947  2          ACL_STRING_LEN,                          ! Length of ACL string buffer
;  952     0948  2          LOCAL_STATUS;                            ! Local routine return status
;  953     0949  2
;  954     0950  2 ! Protection code names.
;  955     0951  2
;  956     0952  2 BIND
;  957     0953  2          PROT_CODE       = UPLIT BYTE ('R', 'W', 'E', 'D', 'C',
;  958     0954  2                                       REP 27 OF (0)) : VECTOR [, BYTE];
;  959     0955  2
;  960     0956  2 ! Probe the output string buffer.
;  961     0957  2
;  962     0958  2 IF PROBER (%REF (0), %REF (DSC$C_S_BLN), .ACL_STRING)
;  963     0959  2 THEN
;  964     0960  3     BEGIN
;  965     0961  3     ACL_STRING_LEN = .ACL_STRING[DSC$W_LENGTH];
;  966     0962  3     IF EXE$PROBEW (0, .ACL_STRING_LEN, .ACL_STRING[DSC$A_POINTER])
;  967     0963  3     THEN CH$FILL (%C' ', .ACL_STRING_LEN, .ACL_STRING[DSC$A_POINTER])
;  968     0964  3     ELSE RETURN SS$_ACCVIO;
;  969     0965  3     END
;  970     0966  2 ELSE RETURN SS$_ACCVIO;
;  971     0967  2
;  972     0968  2 ! Set up initial parameters.
;  973     0969  2
;  974     0970  2 INDENT = WIDTH = 0;
;  975     0971  2 TERM_LENGTH = TERM_POINTER = 0;
;  976     0972  2 ACCESS_MASK = AUDIT_MASK = 0;
;  977     0973  2
;  978     0974  2 ! Check the optional arguments.
;  979     0975  2
;  980     0976  2 IF .LINE_WIDTH NEQA 0
;  981     0977  2 THEN IF PROBER (%REF (0), %REF (4), .LINE_WIDTH)
;  982     0978  2      THEN WIDTH = ..LINE_WIDTH
;  983     0979  2      ELSE RETURN SS$_ACCVIO;
;  984     0980  2
;  985     0981  2 IF .TERM_DESC NEQA 0
;  986     0982  2 THEN
;  987     0983  3     BEGIN
;  988     0984  3     IF PROBER (%REF (0), %REF (DSC$C_S_BLN), .TERM_DESC)
;  989     0985  3     THEN
;  990     0986  4         BEGIN
;  991     0987  4         TERM_LENGTH = .TERM_DESC[DSC$W_LENGTH];
;  992     0988  4         TERM_POINTER = .TERM_DESC[DSC$A_POINTER];
;  993     0989  4         IF NOT EXE$PROBER (0, .TERM_LENGTH, .TERM_POINTER)
```

```
;  994          0990  4          THEN RETURN SS$_ACCVIO;
;  995          0991  4          END
;  996          0992  3      ELSE RETURN SS$_ACCVIO;
;  997          0993  2      END;
;  998          0994  2
;  999          0995  2 IF .LINE_INDENT NEQA 0
; 1000          0996  2 THEN IF PROBER (%REF (0), %REF (4), .LINE_INDENT)
; 1001          0997  2      THEN INDENT = ..LINE_INDENT
; 1002          0998  2      ELSE RETURN SS$_ACCVIO;
; 1003          0999  2
; 1004          1000  2 IF .INDENT GTRU 0
; 1005          1001  2 THEN
; 1006          1002  3      BEGIN
; 1007          1003  3      IF .WIDTH GTR 0
; 1008          1004  4      THEN (IF .INDENT GTRU .WIDTH THEN RETURN SS$_BADPARAM)
; 1009          1005  3      ELSE (IF .INDENT GTRU .ACL_STRING_LEN THEN RETURN SS$_BUFFEROVF);
; 1010          1006  3      IF .INDENT GTRU MAX_FMT_ACE THEN RETURN SS$_BUFFEROVF;
; 1011          1007  2      END;
; 1012          1008  2
; 1013          1009  2
; 1014          1010  2 ! Check to see if an access bit name table was supplied.  If so, use it
; 1015          1011  2 ! rather than the default table.
; 1016          1012  2
; 1017          1013  2 BIT_NAME_TABLE = 0;
; 1018          1014  2 IF .BIT_TABLE NEQA 0
; 1019          1015  2 THEN IF PROBER (%REF (0), %REF (256), .BIT_TABLE)
; 1020          1016  2      THEN BIT_NAME_TABLE = .BIT_TABLE
; 1021          1017  2      ELSE RETURN SS$_ACCVIO;
; 1022          1018  2
; 1023          1019  2 ! Start building the text ACE.
; 1024          1020  2
; 1025          1021  2 CH$FILL (%C' ', .INDENT, BUFFER);
; 1026          1022  2 SIZE = LINE_SIZE = .INDENT;
; 1027          1023  2 STORE_TEXT ('(');
; 1028          1024  2 IF PROBER (%REF (0), %REF (DSC$C_S_BLN), .ACL_ENTRY)
; 1029          1025  2 THEN
; 1030          1026  3      BEGIN
; 1031          1027  3      ACL_ENTRY_LEN = .ACL_ENTRY[DSC$W_LENGTH];
; 1032          1028  3      IF .ACL_ENTRY_LEN GTRU ATR$S_ADDACLENT THEN RETURN SS$_IVACL;
; 1033          1029  3      IF EXE$PROBER (0, .ACL_ENTRY_LEN, .ACL_ENTRY[DSC$A_POINTER])
; 1034          1030  3      THEN CH$MOVE (.ACL_ENTRY_LEN, .ACL_ENTRY[DSC$A_POINTER], LOCAL_ACE)
; 1035          1031  3      ELSE RETURN SS$_ACCVIO;
; 1036          1032  3      END
; 1037          1033  2 ELSE RETURN SS$_ACCVIO;
; 1038          1034  2
; 1039          1035  2 ! Convert the ACE type code.
; 1040          1036  2
; 1041          1037  2 CASE .LOCAL_ACE[ACE$B_TYPE] FROM ACE$C_KEYID TO ACE$C_DIRDEF OF
; 1042          1038  2 SET
; 1043          1039  2     [ACE$C_KEYID]:
; 1044          1040  3         BEGIN
; 1045          1041  3         ACCESS_MASK = 1;
; 1046          1042  3         STORE_TEXT ('IDENTIFIER=');
; 1047          1043  3         INCR J FROM .LOCAL_ACE[ACE$V_RESERVED] + 1 TO (.LOCAL_ACE[ACE$B_SIZE] - ACE$C_LENGTH + 3) / 4
; 1048          1044  3         DO
; 1049          1045  4             BEGIN
; 1050          1046  4             KEY_IDENTIFIER = .VECTOR [LOCAL_ACE[ACE$L_KEY], .J - 1];
```

```
;  1051          1047  4            FAO_DESC[DSC$W_LENGTH] = MAX_FAO_LENGTH;    ! Max size of an identifier
;  1052          1048  4            FAO_DESC[DSC$A_POINTER] = FAO_BUF;
;  1053        P 1049  4            $FAOL (CTRSTR = $DESCRIPTOR ('!%I'),
;  1054        P 1050  4                   OUTLEN = FAO_DESC,
;  1055        P 1051  4                   OUTBUF = FAO_DESC,
;  1056          1052  4                   PRMLST = KEY_IDENTIFIER);
;  1057          1053  4            CHECK_WIDTH (.FAO_DESC[DSC$W_LENGTH]);
;  1058          1054  4            CH$MOVE (.FAO_DESC[DSC$W_LENGTH],
;  1059          1055  4                     .FAO_DESC[DSC$A_POINTER],
;  1060          1056  4                     BUFFER[.SIZE]);
;  1061          1057  4            SIZE = .SIZE + .FAO_DESC[DSC$W_LENGTH];
;  1062          1058  4            STORE_TEXT ('+');
;  1063          1059  3            END;
;  1064          1060  3        BUFFER[.SIZE - 1] = %C',';
;  1065          1061  2        END;
;  1066          1062  2    [ACE$C_BIJNL,
;  1067          1063  2     ACE$C_AIJNL,
;  1068          1064  2     ACE$C_ATJNL]:
;  1069          1065  3        BEGIN
;  1070          1066  3        IF .LOCAL_ACE[ACE$B_TYPE] EQL ACE$C_BIJNL
;  1071          1067  3        THEN STORE_TEXT ('BI_JOURNAL=');
;  1072          1068  3        IF .LOCAL_ACE[ACE$B_TYPE] EQL ACE$C_AIJNL
;  1073          1069  3        THEN STORE_TEXT ('AI_JOURNAL=');
;  1074          1070  3        IF .LOCAL_ACE[ACE$B_TYPE] EQL ACE$C_ATJNL
;  1075          1071  3        THEN STORE_TEXT ('AT_JOURNAL=');
;  1076          1072  3        CHECK_WIDTH (.LOCAL_ACE[ACE$B_SIZE] - $BYTEOFFSET (ACE$L_ACCESS));
;  1077          1073  3        CH$MOVE (.LOCAL_ACE[ACE$B_SIZE] - $BYTEOFFSET (ACE$L_ACCESS),
;  1078          1074  3                 LOCAL_ACE[ACE$L_ACCESS],
;  1079          1075  3                 BUFFER[.SIZE]);
;  1080          1076  3        SIZE = .SIZE + .LOCAL_ACE[ACE$B_SIZE] - $BYTEOFFSET (ACE$L_ACCESS);
;  1081          1077  3        STORE_TEXT (',');
;  1082          1078  2        END;
;  1083          1079  2    [ACE$C_AUDIT,
;  1084          1080  2     ACE$C_ALARM]:
;  1085          1081  3        BEGIN
;  1086          1082  3        ACCESS_MASK = 1;
;  1087          1083  3        AUDIT_MASK = 1;
;  1088          1084  3        IF .LOCAL_ACE[ACE$B_TYPE] EQL ACE$C_AUDIT
;  1089          1085  3        THEN STORE_TEXT ('AUDIT_JOURNAL=');
;  1090          1086  3        IF .LOCAL_ACE[ACE$B_TYPE] EQL ACE$C_ALARM
;  1091          1087  3        THEN STORE_TEXT ('ALARM_JOURNAL=');
;  1092          1088  3        CHECK_WIDTH (.LOCAL_ACE[ACE$B_SIZE] - ACE$C_LENGTH);
;  1093          1089  3        CH$MOVE (.LOCAL_ACE[ACE$B_SIZE] - ACE$C_LENGTH,
;  1094          1090  3                 LOCAL_ACE[ACE$L_KEY],
;  1095          1091  3                 BUFFER[.SIZE]);
;  1096          1092  3        SIZE = .SIZE + .LOCAL_ACE[ACE$B_SIZE] - ACE$C_LENGTH;
;  1097          1093  3        STORE_TEXT (',');
;  1098          1094  2        END;
;  1099          1095  2    [ACE$C_DIRDEF]:
;  1100          1096  3        BEGIN
;  1101          1097  3        STORE_TEXT ('DEFAULT_PROTECTION,');
;  1102          1098  3        INCR K FROM 0 TO 3
;  1103          1099  3        DO
;  1104          1100  4            BEGIN
;  1105          1101  4            CASE .K FROM 0 TO 3 OF
;  1106          1102  4            SET
;  1107          1103  5                [0]:    BEGIN
```

```
;  1108          1104  5                        PROT_VALUE = .LOCAL_ACE[ACE$L_SYS_PROT];
;  1109          1105  5                        PROT_FIELD_DSC = $DESCRIPTOR ('SYSTEM:');
;  1110          1106  4                        END;
;  1111          1107  5                [1]:    BEGIN
;  1112          1108  5                        PROT_VALUE = .LOCAL_ACE[ACE$L_OWN_PROT];
;  1113          1109  5                        PROT_FIELD_DSC = $DESCRIPTOR ('OWNER:');
;  1114          1110  4                        END;
;  1115          1111  5                [2]:    BEGIN
;  1116          1112  5                        PROT_VALUE = .LOCAL_ACE[ACE$L_GRP_PROT];
;  1117          1113  5                        PROT_FIELD_DSC = $DESCRIPTOR ('GROUP:');
;  1118          1114  4                        END;
;  1119          1115  5                [3]:    BEGIN
;  1120          1116  5                        PROT_VALUE = .LOCAL_ACE[ACE$L_WOR_PROT];
;  1121          1117  5                        PROT_FIELD_DSC = $DESCRIPTOR ('WORLD:');
;  1122          1118  4                        END;
;  1123          1119  4            TES;
;  1124          1120  4            PROT_IDX = 0;
;  1125          1121  4            INCR J FROM 0 TO 31
;  1126          1122  4            DO
;  1127          1123  5                BEGIN
;  1128          1124  5                IF .PROT_CODE[.J] NEQ 0 AND NOT .PROT_VALUE<.J, 1>
;  1129          1125  5                THEN
;  1130          1126  6                    BEGIN
;  1131          1127  6                    PROT_BUF[.PROT_IDX] = .PROT_CODE[.J];
;  1132          1128  6                    PROT_IDX = .PROT_IDX + 1;
;  1133          1129  5                    END;
;  1134          1130  4                END;
;  1135          1131  4            CHECK_WIDTH (.PROT_FIELD_DSC[DSC$W_LENGTH] + .PROT_IDX);
;  1136          1132  4            CH$COPY (.PROT_FIELD_DSC[DSC$W_LENGTH], .PROT_FIELD_DSC[DSC$A_POINTER],
;  1137          1133  4                     .PROT_IDX, PROT_BUF,
;  1138          1134  4                     0,
;  1139          1135  4                     512 - .SIZE,
;  1140          1136  4                     BUFFER[.SIZE]);
;  1141          1137  4                SIZE = .SIZE + .PROT_FIELD_DSC[DSC$W_LENGTH] + .PROT_IDX;
;  1142          1138  4                STORE_TEXT (',');
;  1143          1139  3                END;
;  1144          1140  2            END;
;  1145          1141  2        [ACE$C_JNLID]:
;  1146          1142  3            BEGIN
;  1147          1143  3            STORE_TEXT ('RMS_JOURNAL_ID,');
;  1148          1144  3            CH$FILL (0, DSC$C_S_BLN, VOLNAM_DESC);
;  1149          1145  3            CH$FILL (0, VOLNAM_SIZE, VOLNAM_TEXT);
;  1150          1146  3            CH$FILL (0, DSC$C_S_BLN, FILENAME_DESC);
;  1151          1147  3            CH$FILL (0, ATR$S_FILE_SPEC, FILENAME_TEXT);
;  1152          1148  3            CH$COPY (%CHARCOUNT ('DISK$'), UPLIT ('DISK$'),
;  1153          1149  3                     ACE$S_VOLNAM, LOCAL_ACE[ACE$T_VOLNAM],
;  1154          1150  3                     0, VOLNAM_SIZE, VOLNAM_TEXT);
;  1155          1151  3            VOLNAM_DESC[DSC$W_LENGTH] = CH$FIND_CH (VOLNAM_SIZE, VOLNAM_TEXT, 0) -
;  1156          1152  3                                                    VOLNAM_TEXT;
;  1157          1153  3            VOLNAM_DESC[DSC$A_POINTER] = VOLNAM_TEXT;
;  1158          1154  3            FILENAME_DESC[DSC$W_LENGTH] = ATR$S_FILE_SPEC;
;  1159          1155  3            FILENAME_DESC[DSC$A_POINTER] = FILENAME_TEXT;
;  1160          1156  3            LOCAL_STATUS = LIB$FID_TO_NAME (VOLNAM_DESC, LOCAL_ACE[ACE$T_FID],
;  1161          1157  3                                            FILENAME_DESC, FILENAME_DESC);
;  1162          1158  3            STORE_TEXT ('JOURNALED_FILE=');
;  1163          1159  3            IF .LOCAL_STATUS
;  1164          1160  3            THEN
```

```
;  1165          1161  4              BEGIN
;  1166          1162  4              LOCAL       SEGMENT_START   : REF VECTOR [,BYTE],
;  1167          1163  4                          SEGMENT_SIZE;               ! Size of segment to get
;  1168          1164  4              SEGMENT_START = .FILENAME_DESC[DSC$A_POINTER];
;  1169          1165  4              SEGMENT_SIZE = MINU (.WIDTH - .LINE_SIZE, .FILENAME_DESC[DSC$W_LENGTH]);
;  1170          1166  4              DO
;  1171          1167  5                  BEGIN
;  1172          1168  5                  IF .SEGMENT_SIZE LSSU .FILENAME_DESC[DSC$W_LENGTH]
;  1173          1169  5                  THEN
;  1174          1170  5                      DECR J FROM .SEGMENT_SIZE TO 1
;  1175          1171  5                      DO
;  1176          1172  6                          BEGIN
;  1177          1173  6                          IF .SEGMENT_START[.J - 1] EQL ':'
;  1178          1174  6                          OR .SEGMENT_START[.J - 1] EQL ']'
;  1179          1175  6                          OR .SEGMENT_START[.J - 1] EQL '.'
;  1180          1176  6                          OR .SEGMENT_START[.J - 1] EQL ';'
;  1181          1177  6                          THEN
;  1182          1178  7                              BEGIN
;  1183          1179  7                              SEGMENT_SIZE = .J;
;  1184          1180  7                              EXITLOOP;
;  1185          1181  6                              END;
;  1186          1182  5                          END;
;  1187          1183  5                  CH$MOVE (.SEGMENT_SIZE, .SEGMENT_START, BUFFER[.SIZE]);
;  1188          1184  5                  LINE_SIZE = .LINE_SIZE + .SEGMENT_SIZE;
;  1189          1185  5                  SIZE = .SIZE + .SEGMENT_SIZE;
;  1190          1186  5                  FILENAME_DESC[DSC$W_LENGTH] = .FILENAME_DESC[DSC$W_LENGTH] - .SEGMENT_SIZE;
;  1191          1187  5                  SEGMENT_START = .SEGMENT_START + .SEGMENT_SIZE;
;  1192          1188  5                  IF .FILENAME_DESC[DSC$W_LENGTH] GTR 0 THEN NEW_LINE;
;  1193          1189  5                  SEGMENT_SIZE = MINU (.WIDTH - .LINE_SIZE, .FILENAME_DESC[DSC$W_LENGTH]);
;  1194          1190  5                  END
;  1195          1191  4              UNTIL .FILENAME_DESC[DSC$W_LENGTH] LEQ 0;
;  1196          1192  4              STORE_TEXT (',');
;  1197          1193  4              END
;  1198          1194  3          ELSE
;  1199          1195  4              BEGIN
;  1200          1196  4              FAO_DESC[DSC$W_LENGTH] = MAX_FAO_LENGTH;
;  1201          1197  4              FAO_DESC[DSC$A_POINTER] = FAO_BUF;
;  1202        P 1198  4              $FAO ($DESCRIPTOR ('(!UW,!UW,!UW),'),
;  1203        P 1199  4                    FAO_DESC,
;  1204        P 1200  4                    FAO_DESC,
;  1205        P 1201  4                    .(LOCAL_ACE[ACE$T_FID] + $BYTEOFFSET (FID$W_NUM)),
;  1206        P 1202  4                    .(LOCAL_ACE[ACE$T_FID] + $BYTEOFFSET (FID$W_SEQ)),
;  1207          1203  4                    .(LOCAL_ACE[ACE$T_FID] + $BYTEOFFSET (FID$W_RVN)));
;  1208          1204  4              CHECK_WIDTH (.FAO_DESC[DSC$W_LENGTH]);
;  1209          1205  4              CH$MOVE (.FAO_DESC[DSC$W_LENGTH], .FAO_DESC[DSC$A_POINTER], BUFFER[.SIZE]);
;  1210          1206  4              SIZE = .SIZE + .FAO_DESC[DSC$W_LENGTH];
;  1211          1207  3              END;
;  1212          1208  3          STORE_TEXT ('MARKED FOR JOURNALING=');
;  1213          1209  3          FAO_DESC[DSC$W_LENGTH] = MAX_FAO_LENGTH;
;  1214          1210  3          FAO_DESC[DSC$A_POINTER] = FAO_BUF;
;  1215        P 1211  3          $FAO ($DESCRIPTOR ('!%D,'),
;  1216        P 1212  3                FAO_DESC,
;  1217        P 1213  3                FAO_DESC,
;  1218          1214  3                LOCAL_ACE[ACE$Q_ID_DATE]);
;  1219          1215  3          FAO_BUF[11] = ':';
;  1220          1216  3          IF .FAO_BUF[0] EQL ' '
;  1221          1217  3          THEN
```

```
;  1222          1218  4              BEGIN
;  1223          1219  4              FAO_DESC[DSC$W_LENGTH] = .FAO_DESC[DSC$W_LENGTH] - 1;
;  1224          1220  4              FAO_DESC[DSC$A_POINTER] = .FAO_DESC[DSC$A_POINTER] + 1;
;  1225          1221  3              END;
;  1226          1222  3          CHECK_WIDTH (.FAO_DESC[DSC$W_LENGTH]);
;  1227          1223  3          CH$MOVE (.FAO_DESC[DSC$W_LENGTH], .FAO_DESC[DSC$A_POINTER], BUFFER[.SIZE]);
;  1228          1224  3          SIZE = .SIZE + .FAO_DESC[DSC$W_LENGTH];
;  1229          1225  2          END;
;  1230          1226  2
;  1231          1227  2      [INRANGE,
;  1232          1228  2       OUTRANGE]:
;  1233          1229  3          BEGIN
;  1234          1230  3          STORE_TEXT ('Unknown=');
;  1235          1231  3          CHECK_WIDTH (5);
;  1236          1232  3          FAO_DESCR[DSC$W_LENGTH] = 5;
;  1237          1233  3          FAO_DESCR[DSC$A_POINTER] = BUFFER[.SIZE];
;  1238        P 1234  3          $FAOL (CTRSTR = $DESCRIPTOR ('%X!XB,'),
;  1239        P 1235  3                 OUTBUF = FAO_DESCR,
;  1240          1236  3                 PRMLST = %REF (.LOCAL_ACE[ACE$B_TYPE]));
;  1241          1237  3          SIZE = .SIZE + 5;
;  1242          1238  3          STORE_TEXT ('Size=');
;  1243          1239  3          CHECK_WIDTH (5);
;  1244          1240  3          FAO_DESCR[DSC$W_LENGTH] = 5;
;  1245          1241  3          FAO_DESCR[DSC$A_POINTER] = BUFFER[.SIZE];
;  1246        P 1242  3          $FAOL (CTRSTR = $DESCRIPTOR ('%D!UB,'),
;  1247        P 1243  3                 OUTBUF = FAO_DESCR,
;  1248          1244  3                 PRMLST = %REF (.LOCAL_ACE[ACE$B_SIZE]));
;  1249          1245  3          SIZE = .SIZE + 5;
;  1250          1246  3          STORE_TEXT ('Flags=');
;  1251          1247  3          CHECK_WIDTH (7);
;  1252          1248  3          FAO_DESCR[DSC$W_LENGTH] = 7;
;  1253          1249  3          FAO_DESCR[DSC$A_POINTER] = BUFFER[.SIZE];
;  1254        P 1250  3          $FAOL (CTRSTR = $DESCRIPTOR ('%X!XW,'),
;  1255        P 1251  3                 OUTBUF = FAO_DESCR,
;  1256          1252  3                 PRMLST = %REF (.LOCAL_ACE[ACE$W_FLAGS]));
;  1257          1253  3          SIZE = .SIZE + 7;
;  1258          1254  3          STORE_TEXT ('Access=');
;  1259          1255  3          CHECK_WIDTH (11);
;  1260          1256  3          FAO_DESCR[DSC$W_LENGTH] = 11;
;  1261          1257  3          FAO_DESCR[DSC$A_POINTER] = BUFFER[.SIZE];
;  1262        P 1258  3          $FAOL (CTRSTR = $DESCRIPTOR ('%X!XL,'),
;  1263        P 1259  3                 OUTBUF = FAO_DESCR,
;  1264          1260  3                 PRMLST = %REF (.LOCAL_ACE[ACE$L_ACCESS]));
;  1265          1261  3          SIZE = .SIZE + 11;
;  1266          1262  3          STORE_TEXT ('Data=');
;  1267          1263  3          INCR J FROM 1 TO (.LOCAL_ACE[ACE$B_SIZE] - ACE$C_LENGTH + 3) / 4
;  1268          1264  3          DO
;  1269          1265  4              BEGIN
;  1270          1266  4              CHECK_WIDTH (11);
;  1271          1267  4              FAO_DESCR[DSC$W_LENGTH] = 11;
;  1272          1268  4              FAO_DESCR[DSC$A_POINTER] = BUFFER[.SIZE];
;  1273        P 1269  4              $FAOL (CTRSTR = $DESCRIPTOR ('%X!XL,'),
;  1274        P 1270  4                     OUTBUF = FAO_DESCR,
;  1275          1271  4                     PRMLST = VECTOR [LOCAL_ACE[ACE$L_KEY], .J - 1]);
;  1276          1272  4              SIZE = .SIZE + 11;
;  1277          1273  3              END;
;  1278          1274  3          BUFFER[.SIZE - 1] = %C')';
```

```
;1279     1275  3          IF PROBER (%REF (0), %REF (DSC$C_S_BLN), .ACL_STRING)
;1280     1276  3          THEN
;1281     1277  4              BEGIN
;1282     1278  4              IF EXE$PROBEW (0, .ACL_STRING_LEN, .ACL_STRING[DSC$A_POINTER])
;1283     1279  4              THEN CH$COPY (.SIZE, BUFFER, 0, .ACL_STRING_LEN, .ACL_STRING[DSC$A_POINTER])
;1284     1280  4              ELSE RETURN SS$_ACCVIO
;1285     1281  4              END
;1286     1282  3          ELSE RETURN SS$_ACCVIO;
;1287     1283  3          IF .ACL_LENGTH NEQ 0
;1288     1284  3          THEN IF PROBEW (%REF (0), %REF (4), .ACL_LENGTH)
;1289     1285  3               THEN .ACL_LENGTH = .SIZE ELSE RETURN SS$_ACCVIO;
;1290     1286  3          IF .SIZE GTR .ACL_STRING_LEN
;1291     1287  3          THEN RETURN SS$_BUFFEROVF ELSE RETURN SS$_NORMAL;
;1292     1288  2          END;
;1293     1289  2 TES;
;1294     1290  2
;1295     1291  2 ! Note any special flags applied to the ACE.
;1296     1292  2
;1297     1293  2 FLAGS = .LOCAL_ACE[ACE$W_FLAGS];
;1298     1294  2 IF .AUDIT_MASK
;1299     1295  2 THEN FLAGS = .FLAGS AND NOT ($FIELDMASK (ACE$V_SUCCESS) OR $FIELDMASK (ACE$V_FAILURE));
;1300     1296  2 IF .FLAGS NEQ 0
;1301     1297  2 THEN
;1302     1298  3     BEGIN
;1303     1299  3     STORE_TEXT ('OPTIONS=');
;1304     1300  3     IF TESTBITSC (FLAGS[$BITPOSITION (ACE$V_DEFAULT)])
;1305     1301  3     THEN STORE_TEXT ('DEFAULT+');
;1306     1302  3     IF TESTBITSC (FLAGS[$BITPOSITION (ACE$V_HIDDEN)])
;1307     1303  3     THEN STORE_TEXT ('HIDDEN+');
;1308     1304  3     IF TESTBITSC (FLAGS[$BITPOSITION (ACE$V_PROTECTED)])
;1309     1305  3     THEN STORE_TEXT ('PROTECTED+');
;1310     1306  3     IF TESTBITSC (FLAGS[$BITPOSITION (ACE$V_NOPROPAGATE)])
;1311     1307  3     THEN STORE_TEXT ('NOPROPAGATE+');
;1312     1308  3     IF .FLAGS NEQ 0
;1313     1309  3     THEN
;1314     1310  4         BEGIN
;1315     1311  4         CHECK_WIDTH (7);
;1316     1312  4         FAO_DESCR[DSC$W_LENGTH] = 7;
;1317     1313  4         FAO_DESCR[DSC$A_POINTER] = BUFFER[.SIZE];
;1318   P 1314  4         $FAO ($DESCRIPTOR ('%X!XW,'),
;1319   P 1315  4               FAO_DESCR,
;1320   P 1316  4               FAO_DESCR,
;1321     1317  4               .FLAGS);
;1322     1318  4         SIZE = .SIZE + 7;
;1323     1319  4         END
;1324     1320  3     ELSE BUFFER[.SIZE - 1] = %C',';
;1325     1321  2     END;
;1326     1322  2
;1327     1323  2 ! Note the access rights.
;1328     1324  2
;1329     1325  2 IF .ACCESS_MASK
;1330     1326  2 THEN
;1331     1327  3     BEGIN
;1332     1328  3     IF .LOCAL_ACE[ACE$L_ACCESS] NEQ 0
;1333     1329  4     OR (.AUDIT_MASK
;1334     1330  5         AND (.LOCAL_ACE[ACE$V_SUCCESS]
;1335     1331  4              OR .LOCAL_ACE[ACE$V_FAILURE]))
```

```
;  1336          1332  3     THEN
;  1337          1333  4         BEGIN
;  1338          1334  4         STORE_TEXT ('ACCESS=');
;  1339          1335  4         INCR J FROM 0 TO 31
;  1340          1336  4         DO
;  1341          1337  5             BEGIN
;  1342          1338  5             IF .(LOCAL_ACE[ACE$L_ACCESS])<.J,1>
;  1343          1339  5             THEN
;  1344          1340  6                 BEGIN
;  1345          1341  6                 IF .BIT_NAME_TABLE NEQA 0
;  1346          1342  6                 THEN
;  1347          1343  7                     BEGIN
;  1348          1344  7                     IF PROBER (%REF (0), %REF (DSC$C_S_BLN), BIT_NAME_TABLE[.J, 0, 0, 0, 0])
;  1349          1345  7                     THEN BIT_NAME_DESC = BIT_NAME_TABLE[.J, 0, 0, 0, 0]
;  1350          1346  7                     ELSE RETURN SS$_ACCVIO;
;  1351          1347  7                     IF NOT EXE$PROBER (0, .BIT_NAME_DESC[DSC$W_LENGTH],
;  1352          1348  7                                        .BIT_NAME_DESC[DSC$A_POINTER]`
;  1353          1349  7                     THEN RETURN SS$_ACCVIO;
;  1354          1350  7                     END
;  1355          1351  6                 ELSE BIT_NAME_DESC = .DEFAULT_BITS[.J];
;  1356          1352  6                 CHECK_WIDTH (.BIT_NAME_DESC[DSC$W_LENGTH] + 1);
;  1357          1353  6                 CH$MOVE (.BIT_NAME_DESC[DSC$W_LENGTH], .BIT_NAME_DESC[DSC$A_POINTER],
;  1358          1354  6                                                        BUFFER[.SIZE]);
;  1359          1355  6                 BUFFER[.SIZE + .BIT_NAME_DESC[DSC$W_LENGTH]] = '+';
;  1360          1356  6                 SIZE = .SIZE + .BIT_NAME_DESC[DSC$W_LENGTH] + 1;
;  1361          1357  5                 END;
;  1362          1358  4             END;
;  1363          1359  4         IF .AUDIT_MASK
;  1364          1360  4         THEN
;  1365          1361  5             BEGIN
;  1366          1362  5             IF .LOCAL_ACE[ACE$V_SUCCESS] THEN STORE_TEXT ('SUCCESS+');
;  1367          1363  5             IF .LOCAL_ACE[ACE$V_FAILURE] THEN STORE_TEXT ('FAILURE+');
;  1368          1364  4             END;
;  1369          1365  4         END
;  1370          1366  3     ELSE STORE_TEXT ('ACCESS=NONE+');
;  1371          1367  2     END;
;  1372          1368  2
;  1373          1369  2 ! Close off the ACE.
;  1374          1370  2
;  1375          1371  2 BUFFER[.SIZE - 1] = %C')';
;  1376          1372  2
;  1377          1373  2 ! Copy the formatted ACE to the user's buffer and return a size if required.
;  1378          1374  2
;  1379          1375  2 IF PROBER (%REF (0), %REF (DSC$C_S_BLN), .ACL_STRING)
;  1380          1376  2 THEN
;  1381          1377  3     BEGIN
;  1382          1378  3     IF EXE$PROBEW (0, .ACL_STRING_LEN, .ACL_STRING[DSC$A_POINTER])
;  1383          1379  3     THEN CH$COPY (.SIZE, BUFFER, 0, .ACL_STRING_LEN, .ACL_STRING[DSC$A_POINTER])
;  1384          1380  3     ELSE RETURN SS$_ACCVIO
;  1385          1381  3     END
;  1386          1382  2 ELSE RETURN SS$_ACCVIO;
;  1387          1383  2 IF .ACL_LENGTH NEQ 0
;  1388          1384  2 THEN IF PROBEW (%REF (0), %REF (4), .ACL_LENGTH)
;  1389          1385  2      THEN .ACL_LENGTH = .SIZE ELSE RETURN SS$_ACCVIO;
;  1390          1386  2 IF .SIZE GTR .ACL_STRING_LEN
;  1391          1387  2 THEN RETURN SS$_BUFFEROVF ELSE RETURN SS$_NORMAL;
;  1392          1388  2
```

```
; 1393          1389  1 END;                                    ! End of routine SYS$FORMAT_ACL


                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                                                        52  00324 P.ADF:  .ASCII  \R\                                   ;
                                                        57  00325        .ASCII  \W\                                   ;
                                                        45  00326        .ASCII  \E\                                   ;
                                                        44  00327        .ASCII  \D\                                   ;
                                                        43  00328        .ASCII  \C\                                   ;
                                                        00# 00329        .BYTE   0[27]                                 ;
                                                    00  28  00344 P.ADG:  .ASCII  \(\<0><0><0>                          ;
                00  3D  52  45  49  46  49  54  4E  45  44  49  00348 P.ADH:  .ASCII  \IDENTIFIER=\<0>                    ;
                                                49  25  21  00354 P.ADJ:  .ASCII  \!%I\                               ;
                                                        00357            .BLKB   1                                    ;
                                                00000003    00358 P.ADI:  .LONG   3                                    ;
                                                00000000'   0035C        .ADDRESS P.ADJ                               ;
                                                    00  2B  00360 P.ADK:  .ASCII  \+\<0><0><0>                          ;
                00  3D  4C  41  4E  52  55  4F  4A  5F  49  42  00364 P.ADL:  .ASCII  \BI_JOURNAL=\<0>                   ;
                00  3D  4C  41  4E  52  55  4F  4A  5F  49  41  00370 P.ADM:  .ASCII  \AI_JOURNAL=\<0>                   ;
                00  3D  4C  41  4E  52  55  4F  4A  5F  54  41  0037C P.ADN:  .ASCII  \AT_JOURNAL=\<0>                   ;
                                                    00  2C  00388 P.ADO:  .ASCII  \,\<0><0><0>                          ;
00  3D  4C  41  4E  52  55  4F  4A  5F  54  49  44  55  41  0038C P.ADP:  .ASCII  \AUDIT_JOURNAL=\<0><0>                ;
                                                        00  0039B                                                       ;
00  3D  4C  41  4E  52  55  4F  4A  5F  4D  52  41  4C  41  0039C P.ADQ:  .ASCII  \ALARM_JOURNAL=\<0><0>               ;
                                                        00  003AB                                                       ;
                                                    00  00  00  2C  003AC P.ADR:  .ASCII  \,\<0><0><0>                  ;
54  43  45  54  4F  52  50  5F  54  4C  55  41  46  45  44  003B0 P.ADS:  .ASCII  \DEFAULT_PROTECTION,\<0>             ;
                                            00  2C  4E  4F  49  003BF                                                   ;
                                    3A  4D  45  54  53  59  53  003C4 P.ADU:  .ASCII  \SYSTEM:\                         ;
                                                            003CB            .BLKB   1                                  ;
                                                00000007    003CC P.ADT:  .LONG   7                                    ;
                                                00000000'   003D0        .ADDRESS P.ADU                               ;
                                        3A  52  45  4E  57  4F  003D4 P.ADW:  .ASCII  \OWNER:\                         ;
                                                            003DA            .BLKB   2                                  ;
                                                00000006    003DC P.ADV:  .LONG   6                                    ;
                                                00000000'   003E0        .ADDRESS P.ADW                               ;
                                        3A  50  55  4F  52  47  003E4 P.ADY:  .ASCII  \GROUP:\                         ;
                                                            003EA            .BLKB   2                                  ;
                                                00000006    003EC P.ADX:  .LONG   6                                    ;
                                                00000000'   003F0        .ADDRESS P.ADY                               ;
                                        3A  44  4C  52  4F  57  003F4 P.AEA:  .ASCII  \WORLD:\                         ;
                                                            003FA            .BLKB   2                                  ;
                                                00000006    003FC P.ADZ:  .LONG   6                                    ;
                                                00000000'   00400        .ADDRESS P.AEA                               ;
                                                    00  2C  00404 P.AEB:  .ASCII  \,\<0><0><0>                          ;
2C  44  49  5F  4C  41  4E  52  55  4F  4A  5F  53  4D  52  00408 P.AEC:  .ASCII  \RMS_JOURNAL_ID,\<0>                  ;
                                                        00  00417                                                       ;
                                            00  00  00  24  4B  53  49  44  00418 P.AED:  .ASCII  \DISK$\<0><0><0>       ;
3D  45  4C  49  46  5F  44  45  4C  41  4E  52  55  4F  4A  00420 P.AEE:  .ASCII  \JOURNALED_FILE=\<0>                  ;
                                                        00  0042F                                                       ;
                                                    00  00  00  2C  00430 P.AEF:  .ASCII  \,\<0><0><0>                  ;
    2C  29  57  55  21  2C  57  55  21  2C  57  55  21  28  00434 P.AEH:  .ASCII  \(!UW,!UW,!UW),\                     ;
                                                            00442            .BLKB   2                                  ;
                                                0000000E    00444 P.AEG:  .LONG   14                                   ;
                                                00000000'   00448        .ADDRESS P.AEH                               ;
```

```
52 55 4F 4A 5F 52 4F 46 5F 44 45 4B 52 41 4D  0044C P.AEI:  .ASCII  \MARKED_FOR_JOURNALING=\<0><0>          ;
                  00 00 3D 47 4E 49 4C 41 4E  00458                                                       ;
                                 2C 44 25 21  00464 P.AEK:  .ASCII  \!%D,\                               ;
                                    00000004  00468 P.AEJ:  .LONG   4                                    ;
                                    00000000' 0046C         .ADDRESS P.AEK                              ;
                     3D 6E 77 6F 6E 6B 6E 55  00470 P.AEL:  .ASCII  \Unknown=\                           ;
                        2C 42 58 21 58 25     00478 P.AEN:  .ASCII  \%X!XB,\                            ;
                                              0047E         .BLKB   2                                     ;
                                    00000006  00480 P.AEM:  .LONG   6                                    ;
                                    00000000' 00484         .ADDRESS P.AEN                              ;
                     00 00 00 3D 65 7A 69 53  00488 P.AEO:  .ASCII  \Size=\<0><0><0>                     ;
                        2C 42 55 21 44 25     00490 P.AEQ:  .ASCII  \%D!UB,\                            ;
                                              00496         .BLKB   2                                     ;
                                    00000006  00498 P.AEP:  .LONG   6                                    ;
                                    00000000' 0049C         .ADDRESS P.AEQ                              ;
                     00 00 3D 73 67 61 6C 46  004A0 P.AER:  .ASCII  \Flags=\<0><0>                       ;
                        2C 57 58 21 58 25     004A8 P.AET:  .ASCII  \%X!XW,\                            ;
                                              004AE         .BLKB   2                                     ;
                                    00000006  004B0 P.AES:  .LONG   6                                    ;
                                    00000000' 004B4         .ADDRESS P.AET                              ;
                     00 3D 73 73 65 63 63 41  004B8 P.AEU:  .ASCII  \Access=\<0>                         ;
                        2C 4C 58 21 58 25     004C0 P.AEW:  .ASCII  \%X!XL,\                            ;
                                              004C6         .BLKB   2                                     ;
                                    00000006  004C8 P.AEV:  .LONG   6                                    ;
                                    00000000' 004CC         .ADDRESS P.AEW                              ;
                     00 00 00 3D 61 74 61 44  004D0 P.AEX:  .ASCII  \Data=\<0><0><0>                     ;
                        2C 4C 58 21 58 25     004D8 P.AEZ:  .ASCII  \%X!XL,\                            ;
                                              004DE         .BLKB   2                                     ;
                                    00000006  004E0 P.AEY:  .LONG   6                                    ;
                                    00000000' 004E4         .ADDRESS P.AEZ                              ;
                  3D 53 4E 4F 49 54 50 4F  004E8 P.AFA:  .ASCII  \OPTIONS=\                             ;
                  2B 54 4C 55 41 46 45 44  004F0 P.AFB:  .ASCII  \DEFAULT+\                             ;
                  00 2B 4E 45 44 44 49 48  004F8 P.AFC:  .ASCII  \HIDDEN+\<0>                           ;
00 00 2B 44 45 54 43 45 54 4F 52 50       00500 P.AFD:  .ASCII  \PROTECTED+\<0><0>                      ;
2B 45 54 41 47 41 50 4F 52 50 4F 4E       0050C P.AFE:  .ASCII  \NOPROPAGATE+\                          ;
                        2C 57 58 21 58 25     00518 P.AFG:  .ASCII  \%X!XW,\                            ;
                                              0051E         .BLKB   2                                     ;
                                    00000006  00520 P.AFF:  .LONG   6                                    ;
                                    00000000' 00524         .ADDRESS P.AFG                              ;
                     00 3D 53 53 45 43 43 41  00528 P.AFH:  .ASCII  \ACCESS=\<0>                         ;
                     2B 53 53 45 43 43 55 53  00530 P.AFI:  .ASCII  \SUCCESS+\                           ;
                     2B 45 52 55 4C 49 41 46  00538 P.AFJ:  .ASCII  \FAILURE+\                           ;
2B 45 4E 4F 4E 3D 53 53 45 43 43 41       00540 P.AFK:  .ASCII  \ACCESS=NONE+\                          ;

                                          PROT_CODE=        P.ADF
                                                .EXTRN  SYS$FAOL, SYS$FAO

                                                .PSECT  $CODE$,NOWRT,2

                                       0FFC 00000         .ENTRY  SYS$FORMAT_ACL, Save R2,R3,R4,R5,R6,R7,R8,- ; 0820
                                                                  R9,R10,R11                                    ;
                                 5E    E87C   CE  9E 00002         MOVAB   -6020(SP), SP                       ;
                  0C BC          08           00  0C 00007         PROBER  #0, #8, @ACL_STRING                 ; 0958
                                              79  13 0000C         BEQL    5$                                  ;
                                 6E    0C     BC  3C 0000E         MOVZWL  @ACL_STRING, ACL_STRING_LEN         ; 0961
                     54       0C   AC           04  C1 00012         ADDL3   #4, ACL_STRING, R4                  ; 0962
                                    50           64  D0 00017         MOVL    (R4), R0                            ;
```

```
                                51              6E  D0 0001A          MOVL    ACL_STRING_LEN, R1                                      ;
                                                53  D4 0001D          CLRL    R3                                                      ;
                          00000000G             00  16 0001F          JSB     EXE$PROBEW                                              ;
                                4F              50  E9 00025          BLBC    R0, 2$                                                  ;
                             56       0C        04  C1 00028          ADDL3   #4, ACL_STRING, R6                                      ; 0963
                          6E 20       6E        00  2C 0002D          MOVC5   #0, (SP), #32, ACL_STRING_LEN, @(R6)+                   ;
                                                96      00032                                                                          ;
                                                59  7C 00033          CLRQ    WIDTH                                                   ; 0970
                                      08        AE  D4 00035          CLRL    TERM_POINTER                                            ; 0971
                                                5B  D4 00038          CLRL    TERM_LENGTH                                             ;
                                      24        AE  94 0003A          CLRB    AUDIT_MASK                                              ; 0972
                                      20        AE  94 0003D          CLRB    ACCESS_MASK                                             ;
                                51    10        AC  D0 00040          MOVL    LINE_WIDTH, R0                                          ; 0976
                                                09  13 00044          BEQL    1$                                                      ;
                             60       04            00  0C 00046          PROBER  #0, #4, (R0)                                            ; 0977
                                                74  13 0004A          BEQL    11$                                                     ;
                                51              60  D0 0004C          MOVL    (R0), WIDTH                                             ; 0978
                                      14        AC  D5 0004F 1$:      TSTL    TERM_DESC                                               ; 0981
                                                29  13 00052          BEQL    4$                                                      ;
                          14 BC                 08      00054          PROBER  #0, #8, @TERM_DESC                                      ; 0984
                                                65  13 00059          BEQL    11$                                                     ;
                                5B        14    BC  3C 0005B          MOVZWL  @TERM_DESC, TERM_LENGTH                                 ; 0987
                             50       14        AC  04  C1 0005F          ADDL3   #4, TERM_DESC, R0                                       ; 0988
                                      08        AE  60  D0 00064          MOVL    (R0), TERM_POINTER                                      ;
                                51              50  08  AE D0 00068          MOVL    TERM_POINTER, R0                                        ; 0989
                                                5B  D0 0006C          MOVL    TERM_LENGTH, R1                                         ;
                                                53  D4 0006F          CLRL    R3                                                      ;
                          00000000G             00  16 00071          JSB     EXE$PROBER                                              ;
                                03              50  E8 00077 2$:      BLBS    R0, 4$                                                  ;
                                             1087   31 0007A 3$:      BRW     172$                                                    ;
                                50        18    AC  D0 0007D 4$:      MOVL    LINE_INDENT, R0                                         ; 0995
                                                09  13 00081          BEQL    6$                                                      ;
                             60       04            00  0C 00083          PROBER  #0, #4, (R0)                                            ; 0996
                                                F1  13 00087 5$:      BEQL    3$                                                      ;
                                5A              60  D0 00089          MOVL    (R0), INDENT                                            ; 0997
                                                5A  D5 0008C 6$:      TSTL    INDENT                                                  ; 1000
                                                1E  13 0008E          BEQL    10$                                                     ;
                                                59  D5 00090          TSTL    WIDTH                                                   ; 1003
                                                09  15 00092          BLEQ    7$                                                      ;
                                59              5A  D1 00094          CMPL    INDENT, WIDTH                                           ; 1004
                                                09  1B 00097          BLEQU   8$                                                      ;
                                50              14  D0 00099          MOVL    #20, R0                                                 ;
                                                04  0009C          RET                                                             ;
                                6E              5A  D1 0009D 7$:      CMPL    INDENT, ACL_STRING_LEN                                  ; 1005
                                                07  1A 000A0          BGTRU   9$                                                      ;
                          00000C00              8F  5A  D1 000A2 8$:      CMPL    INDENT, #3072                                           ; 1006
                                                03  1B 000A9 9$:      BLEQU   10$                                                     ;
                                             105F   31 000AB          BRW     174$                                                    ;
                          00000000'             EF  D4 000AE 10$:     CLRL    BIT_NAME_TABLE                                          ; 1013
                                50        1C    AC  D0 000B4          MOVL    BIT_TABLE, R0                                           ; 1014
                                                0F  13 000B8          BEQL    12$                                                     ;
                             60       0100      8F      000BA          PROBER  #0, #256, (R0)                                          ; 1015
                                                B8  13 000C0 11$:     BEQL    3$                                                      ;
                          00000000'             EF  50  D0 000C2          MOVL    R0, BIT_NAME_TABLE                                      ; 1016
                          5A 20                 6E      00  2C 000C9 12$:     MOVC5   #0, (SP), #32, INDENT, BUFFER                           ; 1021
                                      0A5C      CE          000CE                                                                      ;
                                57              5A  D0 000D1          MOVL    INDENT, LINE_SIZE                                       ; 1022
```

```
                                56              5A   D0 000D4          MOVL    INDENT, SIZE                                    ;
                                          28    AE   D4 000D7          CLRL    40(SP)                                          ; 1023
                                                59   D5 000DA          TSTL    WIDTH                                           ;
                                                2E   13 000DC          BEQL    14$                                             ;
                                          28    AE   D6 000DE          INCL    40(SP)                                          ;
                                50        01    A7   9E 000E1          MOVAB   1(R7), R0                                       ;
                                59              50   D1 000E5          CMPL    R0, WIDTH                                       ;
                                                22   1B 000E8          BLEQU   14$                                             ;
                                                5B   D5 000EA          TSTL    TERM_LENGTH                                     ;
                                                0F   15 000EC          BLEQ    13$                                             ;
                    0A5C CE46   08              5B   28 000EE          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]        ;
                                50        14    BC   3C 000F6          MOVZWL  @TERM_DESC, R0                                  ;
                                56              50   C0 000FA          ADDL2   R0, SIZE                                        ;
                5A        20    6E              00   2C 000FD 13$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]             ;
                                          0A5C CE46     00102                                                                 ;
                                56              5A   C0 00106          ADDL2   INDENT, SIZE                                    ;
                                57              5A   D0 00109          MOVL    INDENT, LINE_SIZE                               ;
                                                57   D6 0010C 14$:     INCL    LINE_SIZE                                       ;
                          0A5C CE46 00000000'   EF   90 0010E          MOVB    P.ADG, BUFFER[SIZE]                             ;
                                                56   D6 00118          INCL    SIZE                                            ;
                                54        04    AC   D0 0011A          MOVL    ACL_ENTRY, R4                                   ; 1024
                    64          08              00   0C 0011E          PROBER  #0, #8, (R4)                                    ;
                                                24   13 00122          BEQL    16$                                             ;
                                55              64   3C 00124          MOVZWL  (R4), ACL_ENTRY_LEN                             ; 1027
                       000000FF 8F              55   D1 00127          CMPL    ACL_ENTRY_LEN, #255                             ; 1028
                                                06   1B 0012E          BLEQU   15$                                             ;
                                50      21E4    8F   3C 00130          MOVZWL  #8676, R0                                       ;
                                                     04 00135          RET                                                     ;
                                50        04    A4   D0 00136 15$:     MOVL    4(R4), R0                                       ; 1029
                                51              55   D0 0013A          MOVL    ACL_ENTRY_LEN, R1                               ;
                                                53   D4 0013D          CLRL    R3                                              ;
                              00000000G         00   16 0013F          JSB     EXE$PROBER                                      ;
                                03              50   E8 00145          BLBS    R0, 17$                                         ;
                                          0FB9  31   00148 16$:         BRW     172$                                            ;
                FF00    CD        04    B4              55   28 0014B 17$:     MOVC3   ACL_ENTRY_LEN, @4(R4), LOCAL_ACE        ; 1030
                                18    AE        FF01  CD   9A 00152          MOVZBL  LOCAL_ACE+1, 24(SP)                     ; 1037
                          08            01        18  AE   8F 00158          CASEB   24(SP), #1, #8                          ;
        04A8            04A8            04A8        0387       0015D 18$:     .WORD   46$-18$,-                               ;
        08A4            0012            0609        0609       00165                  55$-18$,-                               ;
                                                    072E       0016D                  55$-18$,-                               ;
                                                                                      55$-18$,-                               ;
                                                                                      69$-18$,-                               ;
                                                                                      69$-18$,-                               ;
                                                                                      19$-18$,-                               ;
                                                                                      98$-18$,-                               ;
                                                                                      81$-18$                                 ;
                                28        28    AE   E9 0016F 19$:     BLBC    40(SP), 21$                                     ; 1230
                                50        08    A7   9E 00173          MOVAB   8(R7), R0                                       ;
                                59              50   D1 00177          CMPL    R0, WIDTH                                       ;
                                                22   1B 0017A          BLEQU   21$                                             ;
                                                5B   D5 0017C          TSTL    TERM_LENGTH                                     ;
                                                0F   15 0017E          BLEQ    20$                                             ;
                    0A5C CE46   08              5B   28 00180          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]        ;
                                50        14    BC   3C 00188          MOVZWL  @TERM_DESC, R0                                  ;
                                56              50   C0 0018C          ADDL2   R0, SIZE                                        ;
                5A        20    6E              00   2C 0018F 20$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]             ;
                                          0A5C CE46     00194                                                                 ;
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                                56              5A  C0 00198          ADDL2   INDENT, SIZE                                                    ;
                                57              5A  D0 0019B          MOVL    INDENT, LINE_SIZE                                               ;
                                57              08  C0 0019E 21$:     ADDL2   #8, LINE_SIZE                                                   ;
                    0A5C CE46 00000000'         EF              08  28 001A1          MOVC3   #8, P.AEC, BUFFER[SIZE]                         ;
                                56              08  C0 001AC          ADDL2   #8, SIZE                                                        ;
                                2B          28  AE  E9 001AF          BLBC    40(SP), 23$                                                     ; 1231
                                50          05  A7  9E 001B3          MOVAB   5(R7), R0                                                       ;
                                59              50  D1 001B7          CMPL    R0, WIDTH                                                       ;
                                                22  1B 001BA          BLEQU   23$                                                             ;
                                                5B  D5 001BC          TSTL    TERM_LENGTH                                                     ;
                                                0F  15 001BE          BLEQ    22$                                                             ;
                    0A5C CE46           08      BE              5B  28 001C0          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]        ;
                                50          14  BC              3C 001C8          MOVZWL  @TERM_DESC, R0                                          ;
                                56              50  C0 001CC          ADDL2   R0, SIZE                                                        ;
                5A                  20          6E              00  2C 001CF 22$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]             ;
                                                    0A5C CE46           001D4                                                                   ;
                                56              5A  C0 001D8          ADDL2   INDENT, SIZE                                                    ;
                                57              5A  D0 001DB          MOVL    INDENT, LINE_SIZE                                               ;
                                57              05  C0 001DE 23$:     ADDL2   #5, LINE_SIZE                                                   ;
                            FEF8    CD              05  B0 001E1          MOVW    #5, FAO_DESCR                                                   ; 1232
                            FEFC    CD          0A5C CE46   9E 001E6          MOVAB   BUFFER[SIZE], FAO_DESCR+4                               ; 1233
                              1C    AE            18    AE  D0 001EE          MOVL    24(SP), 28(SP)                                          ; 1236
                                    1C    AE      9F 001F3          PUSHAB  28(SP)                                                          ;
                                        FEF8    CD  9F 001F6          PUSHAB  FAO_DESCR                                                       ;
                                                7E  D4 001FA          CLRL    -(SP)                                                           ;
                                    00000000'   EF  9F 001FC          PUSHAB  P.AEM                                                           ;
                        00000000G   00              04  FB 00202          CALLS   #4, SYS$FAOL                                                    ;
                                56              05  C0 00209          ADDL2   #5, SIZE                                                        ; 1237
                                2B          28  AE  E9 0020C          BLBC    40(SP), 25$                                                     ; 1238
                                50          05  A7  9E 00210          MOVAB   5(R7), R0                                                       ;
                                59              50  D1 00214          CMPL    R0, WIDTH                                                       ;
                                                22  1B 00217          BLEQU   25$                                                             ;
                                                5B  D5 00219          TSTL    TERM_LENGTH                                                     ;
                                                0F  15 0021B          BLEQ    24$                                                             ;
                    0A5C CE46           08      BE              5B  28 0021D          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]        ;
                                50          14  BC              3C 00225          MOVZWL  @TERM_DESC, R0                                          ;
                                56              50  C0 00229          ADDL2   R0, SIZE                                                        ;
                5A                  20          6E              00  2C 0022C 24$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]             ;
                                                    0A5C CE46           00231                                                                   ;
                                56              5A  C0 00235          ADDL2   INDENT, SIZE                                                    ;
                                57              5A  D0 00238          MOVL    INDENT, LINE_SIZE                                               ;
                                57              05  C0 0023B 25$:     ADDL2   #5, LINE_SIZE                                                   ;
                    0A5C CE46 00000000'         EF              05  28 0023E          MOVC3   #5, P.AED, BUFFER[SIZE]                         ;
                                56              05  C0 00249          ADDL2   #5, SIZE                                                        ;
                                2B          28  AE  E9 0024C          BLBC    40(SP), 27$                                                     ; 1239
                                50          05  A7  9E 00250          MOVAB   5(R7), R0                                                       ;
                                59              50  D1 00254          CMPL    R0, WIDTH                                                       ;
                                                22  1B 00257          BLEQU   27$                                                             ;
                                                5B  D5 00259          TSTL    TERM_LENGTH                                                     ;
                                                0F  15 0025B          BLEQ    26$                                                             ;
                    0A5C CE46           08      BE              5B  28 0025D          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]        ;
                                50          14  BC              3C 00265          MOVZWL  @TERM_DESC, R0                                          ;
                                56              50  C0 00269          ADDL2   R0, SIZE                                                        ;
                5A                  20          6E              00  2C 0026C 26$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]             ;
                                                    0A5C CE46           00271                                                                   ;
                                56              5A  C0 00275          ADDL2   INDENT, SIZE                                                    ;
                                57              5A  D0 00278          MOVL    INDENT, LINE_SIZE                                               ;
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                                                57            05   C0 0027B 27$:     ADDL2   #5, LINE_SIZE                                    ;
                                          FEF8  CD            05   B0 0027E         MOVW    #5, FAO_DESCR                                    ; 1240
                                          FEFC  CD      0A5C  CE46 9E 00283         MOVAB   BUFFER[SIZE], FAO_DESCR+4                        ; 1241
                                            1C  AE      FF00  CD   9A 00288         MOVZBL  LOCAL_ACE, 28(SP)                                ; 1244
                                                          1C  AE   9F 0028B         PUSHAB  28(SP)                                           ;
                                                      FEF8  CD     9F 00291         PUSHAB  FAO_DESCR                                        ;
                                                            7E     D4 00294         CLRL    -(SP)                                            ;
                                                00000000'   EF     9F 00298         PUSHAB  P.AEP                                            ;
                                     00000000G  00                  04 FB 0029A     CALLS   #4, SYS$FAOL                                     ;
                                                56                  05 C0 0029F     ADDL2   #5, SIZE                                         ; 1245
                                                2B          28  AE  E9 002A2         BLBC    40(SP), 29$                                      ; 1246
                                                50          06  A7  9E 002A6         MOVAB   6(R7), R0                                        ;
                                                59                  50 D1 002AA     CMPL    R0, WIDTH                                        ;
                                                                    22 1B 002AD     BLEQU   29$                                              ;
                                                                    5B D5 002AF     TSTL    TERM_LENGTH                                      ;
                                                                    0F 15 002B1     BLEQ    28$                                              ;
                                           0A5C CE46        08  BE              5B 28 002B3 MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE] ;
                                                50          14  BC              3C 002BB MOVZWL  @TERM_DESC, R0                          ;
                                                56                  50 C0 002BF     ADDL2   R0, SIZE                                         ;
                                        5A            20    6E                  00 2C 002C2 28$:    MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE] ;
                                                                0A5C CE46           002C7       ;                                            ;
                                                56                  5A C0 002CB     ADDL2   INDENT, SIZE                                     ;
                                                57                  5A D0 002CE     MOVL    INDENT, LINE_SIZE                                ;
                                                57                  06 C0 002D1 29$:    ADDL2   #6, LINE_SIZE                                    ;
                                           0A5C CE46 00000000'  EF                  06 28 002D4 MOVC3   #6, P.AER, BUFFER[SIZE]              ;
                                                56                  06 C0 002DF     ADDL2   #6, SIZE                                         ;
                                                2B          28  AE  E9 002E2         BLBC    40(SP), 31$                                      ; 1247
                                                50          07  A7  9E 002E6         MOVAB   7(R7), R0                                        ;
                                                59                  50 D1 002EA     CMPL    R0, WIDTH                                        ;
                                                                    22 1B 002ED     BLEQU   31$                                              ;
                                                                    5B D5 002EF     TSTL    TERM_LENGTH                                      ;
                                                                    0F 15 002F1     BLEQ    30$                                              ;
                                           0A5C CE46        08  BE              5B 28 002F3 MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE] ;
                                                50          14  BC              3C 002FB MOVZWL  @TERM_DESC, R0                          ;
                                                56                  50 C0 002FF     ADDL2   R0, SIZE                                         ;
                                        5A            20    6E                  00 2C 00302 30$:    MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE] ;
                                                                0A5C CE46           00307       ;                                            ;
                                                56                  5A C0 0030B     ADDL2   INDENT, SIZE                                     ;
                                                57                  5A D0 0030E     MOVL    INDENT, LINE_SIZE                                ;
                                                57                  07 C0 00311 31$:    ADDL2   #7, LINE_SIZE                                    ;
                                                      FEF8  CD            07 B0 00314     MOVW    #7, FAO_DESCR                            ; 1248
                                                      FEFC  CD      0A5C  CE46 9E 00319   MOVAB   BUFFER[SIZE], FAO_DESCR+4                ; 1249
                                                        1C  AE      FF02  CD   3C 00321   MOVZWL  LOCAL_ACE+2, 28(SP)                      ; 1252
                                                                      1C  AE   9F 00329   PUSHAB  28(SP)                                   ;
                                                                  FEF8  CD     9F 0032C   PUSHAB  FAO_DESCR                                ;
                                                                        7E     D4 00332   CLRL    -(SP)                                    ;
                                                            00000000'   EF     9F 00334   PUSHAB  P.AES                                    ;
                                                 00000000G  00                  04 FB 00338 CALLS   #4, SYS$FAOL                         ;
                                                56                  07 C0 00340     ADDL2   #7, SIZE                                         ; 1253
                                                2B          28  AE  E9 00343         BLBC    40(SP), 33$                                      ; 1254
                                                50          07  A7  9E 00347         MOVAB   7(R7), R0                                        ;
                                                59                  50 D1 0034B     CMPL    R0, WIDTH                                        ;
                                                                    22 1B 0034E     BLEQU   33$                                              ;
                                                                    5B D5 00350     TSTL    TERM_LENGTH                                      ;
                                                                    0F 15 00352     BLEQ    32$                                              ;
                                           0A5C CE46        08  BE              5B 28 00354 MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE] ;
                                                50          14  BC              3C 0035C MOVZWL  @TERM_DESC, R0                          ;
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                                                 50  C0 00365          ADDL2   R0, SIZE                                                    ;
                5A            20                 6E                00  2C 00368 32$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                  ;
                                                                0A5C CE46     0036D                                                          ;
                                                 56                5A  C0 00371          ADDL2   INDENT, SIZE                                    ;
                                                 57                5A  D0 00374          MOVL    INDENT, LINE_SIZE                               ;
                                                 57                07  C0 00377 33$:     ADDL2   #7, LINE_SIZE                                   ;
                      0A5C CE46 00000000'        EF                07  28 0037A          MOVC3   #7, P.AEO, BUFFER[SIZE]                         ;
                                                 56                07  C0 00385          ADDL2   #7, SIZE                                        ;
                                                 2B          28    AE  E9 00388          BLBC    40(SP), 35$                                     ; 1255
                                                 50          0B    A7  9E 0038C          MOVAB   11(R7), R0                                      ;
                                                 59                50  D1 00390          CMPL    R0, WIDTH                                       ;
                                                                   22  1B 00393          BLEQU   35$                                             ;
                                                                   5B  D5 00395          TSTL    TERM_LENGTH                                     ;
                                                                   0F  15 00397          BLEQ    34$                                             ;
                      0A5C CE46           08    BE                5B  28 00399          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]        ;
                                                 50          14    BC  3C 003A1          MOVZWL  @TERM_DESC, R0                                  ;
                                                 56                50  C0 003A5          ADDL2   R0, SIZE                                        ;
                5A            20                 6E                00  2C 003A8 34$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]             ;
                                                                0A5C CE46     003AD                                                          ;
                                                 56                5A  C0 003B1          ADDL2   INDENT, SIZE                                    ;
                                                 57                5A  D0 003B4          MOVL    INDENT, LINE_SIZE                               ;
                                                 57                0B  C0 003B7 35$:     ADDL2   #11, LINE_SIZE                                  ;
                                     FEF8        CD                0B  B0 003BA          MOVW    #11, FAO_DESCR                                  ; 1256
                                     FEFC        CD          0A5C CE46 9E 003BF          MOVAB   BUFFER[SIZE], FAO_DESCR+4                       ; 1257
                                       1C        AE          FF04  CD  D0 003C7          MOVL    LOCAL_ACE+4, 28(SP)                             ; 1260
                                                               1C    AE  9F 003CD          PUSHAB  28(SP)                                          ;
                                                             FEF8    CD  9F 003D0          PUSHAB  FAO_DESCR                                       ;
                                                                     7E  D4 003D4          CLRL    -(SP)                                           ;
                                                          00000000'  EF  9F 003D6          PUSHAB  P.AEV                                           ;
                                           00000000G     00                04  FB 003DC          CALLS   #4, SYS$FAOL                                    ;
                                                 56                0B  C0 003E3          ADDL2   #11, SIZE                                       ; 1261
                                                 2B          28    AE  E9 003E6          BLBC    40(SP), 37$                                     ; 1262
                                                 50          05    A7  9E 003EA          MOVAB   5(R7), R0                                       ;
                                                 59                50  D1 003EE          CMPL    R0, WIDTH                                       ;
                                                                   22  1B 003F1          BLEQU   37$                                             ;
                                                                   5B  D5 003F3          TSTL    TERM_LENGTH                                     ;
                                                                   0F  15 003F5          BLEQ    36$                                             ;
                      0A5C CE46           08    BE                5B  28 003F7          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]        ;
                                                 50          14    BC  3C 003FF          MOVZWL  @TERM_DESC, R0                                  ;
                                                 56                50  C0 00403          ADDL2   R0, SIZE                                        ;
                5A            20                 6E                00  2C 00406 36$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]             ;
                                                                0A5C CE46     0040B                                                          ;
                                                 56                5A  C0 0040F          ADDL2   INDENT, SIZE                                    ;
                                                 57                5A  D0 00412          MOVL    INDENT, LINE_SIZE                               ;
                                                 57                05  C0 00415 37$:     ADDL2   #5, LINE_SIZE                                   ;
                      0A5C CE46 00000000'        EF                05  28 00418          MOVC3   #5, P.AEX, BUFFER[SIZE]                         ;
                                                 56                05  C0 00423          ADDL2   #5, SIZE                                        ;
                                       1C        AE          FF00  CD  9A 00426          MOVZBL  LOCAL_ACE, 28(SP)                               ; 1263
                                       1C        AE                05  C2 0042C          SUBL2   #5, 28(SP)                                      ;
                                       1C        AE                04  C6 00430          DIVL2   #4, 28(SP)                                      ;
                                                                   58  D4 00434          CLRL    J                                               ;
                                                                   5A  11 00436          BRB     41$                                             ;
                                                 2B          28    AE  E9 00438 38$:     BLBC    40(SP), 40$                                     ; 1266
                                                 50          0B    A7  9E 0043C          MOVAB   11(R7), R0                                      ;
                                                 59                50  D1 00440          CMPL    R0, WIDTH                                       ;
                                                                   22  1B 00443          BLEQU   40$                                             ;
                                                                   5B  D5 00445          TSTL    TERM_LENGTH                                     ;
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                                                 0F  15 00447          BLEQ    39$                                                    ;
                 0A5C CE46       08    BE        5B  28 00449          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]            ;
                                 50      14      BC  3C 00451          MOVZWL  @TERM_DESC, R0                                         ;
                                 56              50  C0 00455          ADDL2   R0, SIZE                                               ;
           5A          20        6E              00  2C 00458 39$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                    ;
                                                 0A5C CE46   0045D                                                                  ;
                                 56              5A  C0 00461          ADDL2   INDENT, SIZE                                           ;
                                 57              5A  D0 00464          MOVL    INDENT, LINE_SIZE                                      ;
                                 57              0B  C0 00467 40$:     ADDL2   #11, LINE_SIZE                                         ;
                           FEF8  CD              0B  B0 0046A          MOVW    #11, FAO_DESCR                                         ; 1267
                           FEFC  CD        0A5C CE46 9E 0046F          MOVAB   BUFFER[SIZE], FAO_DESCR+4                              ; 1268
                                           FF04 CD48 DF 00477          PUSHAL  LOCAL_ACE+4[J]                                         ; 1271
                                           FEF8  CD  9F 0047C          PUSHAB  FAO_DESCR                                              ;
                                                 7E  D4 00480          CLRL    -(SP)                                                  ;
                                     00000000'   EF  9F 00482          PUSHAB  P.AEY                                                  ;
                             00000000G   00              04  FB 00488 CALLS   #4, SYS$FAOL                                           ;
                                 56              0R  C0 0048F          ADDL2   #11, SIZE                                              ; 1272
                           A1            58      1C  AE  F3 00492 41$: AOBLEQ  28(SP), J, 38$                                        ; 1263
                                      0A5B CE46          29  90 00497 MOVB    #41, BUFFER-1[SIZE]                                    ; 1274
                       0C  BC                08          00  0C 0049D PROBER  #0, #8, @ACL_STRING                                    ; 1275
                                                 16  13 004A2          BEQL    42$                                                    ;
                           54        0C    AC              04  C1 004A4 ADDL3   #4, ACL_STRING, R4                                     ; 1278
                                 50              64  D0 004A9          MOVL    (R4), R0                                               ;
                                 51              6E  D0 004AC          MOVL    ACL_STRING_LEN, R1                                     ;
                                                 53  D4 004AF          CLRL    R3                                                     ;
                                     00000000G   00  16 004B1          JSB     EXE$PROBEW                                             ;
                                 03              50  E8 004B7          BLBS    R0, 43$                                                ;
                                               0C47  31 004BA 42$:     BRW     172$                                                   ;
                           58        0C    AC              04  C1 004BD 43$:     ADDL3   #4, ACL_STRING, R8                           ; 1279
           6E              00      0A5C    CE              56  2C 004C2 MOVC5   SIZE, BUFFER, #0, ACL_STRING_LEN, @(R8)+           ;
                                                 98          004C9                                                                  ;
                                 50        08    AC  D0 004CA          MOVL    ACL_LENGTH, R0                                         ; 1283
                                                 09  13 004CE          BEQL    44$                                                    ;
                           60              04              00  0D 004D0 PROBEW  #0, #4, (R0)                                         ; 1284
                                                 E4  13 004D4          BEQL    42$                                                    ;
                                 60              56  D0 004D6          MOVL    SIZE, (R0)                                             ; 1285
                                 6E              56  D1 004D9 44$:     CMPL    SIZE, ACL_STRING_LEN                                   ; 1286
                                                 03  14 004DC          BGTR    45$                                                    ;
                                               0C32  31 004DE          BRW     175$                                                   ;
                                               0C29  31 004E1 45$:     BRW     174$                                                   ;
                                20         AE              01  90 004E4 46$:     MOVB    #1, ACCESS_MASK                              ; 1041
                                2B   28    AE              E9 004E8              BLBC    40(SP), 48$                                  ; 1042
                                50   0B    A7              9E 004EC              MOVAB   11(R7), R0                                   ;
                                59              50  D1 004F0          CMPL    R0, WIDTH                                              ;
                                                22  1B 004F3          BLEQU   48$                                                    ;
                                                5B  D5 004F5          TSTL    TERM_LENGTH                                            ;
                                                0F  15 004F7          BLEQ    47$                                                    ;
                 0A5C CE46       08    BE        5B  28 004F9          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]               ;
                                 50      14      BC  3C 00501          MOVZWL  @TERM_DESC, R0                                         ;
                                 56              50  C0 00505          ADDL2   R0, SIZE                                               ;
           5A          20        6E              00  2C 00508 47$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                    ;
                                                 0A5C CE46   0050D                                                                  ;
                                 56              5A  C0 00511          ADDL2   INDENT, SIZE                                           ;
                                 57              5A  D0 00514          MOVL    INDENT, LINE_SIZE                                      ;
                                 57              0B  C0 00517 48$:     ADDL2   #11, LINE_SIZE                                         ;
                 0A5C CE46 00000000'   EF        0B  28 0051A          MOVC3   #11, P.ADA, BUFFER[SIZE]                               ;
                                 56              0B  C0 00525          ADDL2   #11, SIZE                                              ;
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                                1C   AE      FF00    CD  9A 00528          MOVZBL  LOCAL_ACE, 28(SP)                                  ; 1043
                                1C   AE              05  C2 0052E          SUBL2   #5, 28(SP)                                       ;
                                1C   AE              04  C6 00532          DIVL2   #4, 28(SP)                                       ;
        58      FF02    CD              04          00  EF 00536          EXTZV   #0, #4, LOCAL_ACE+2, J                           ;
                                                 00B5   31 0053D          BRW     54$                                              ;
                                2C   AE      FF04 CD48  D0 00540 49$:     MOVL    LOCAL_ACE+4[J], KEY_IDENTIFIER                   ; 1046
                            0A54   CE      0200    8F  B0 00547          MOVW    #512, FAO_DESC                                   ; 1047
                            0A58   CE      0854    CE  9E 0054E          MOVAB   FAO_BUF, FAO_DESC+4                              ; 1048
                                           2C   AE  9F 00555          PUSHAB  KEY_IDENTIFIER                                   ; 1052
                                       0A58   CE  9F 00558          PUSHAB  FAO_DESC                                         ;
                                       0A5C   CE  9F 0055C          PUSHAB  FAO_DESC                                         ;
                                   00000000'  EF  9F 00560          PUSHAB  P.ADI                                            ;
                        00000000G      00          04  FB 00566          CALLS   #4, SYS$FAOL                                     ;
                                       2F      28  AE  E9 0056D          BLBC    40(SP), 51$                                      ; 1053
                                       50    0A54  CE  3C 00571          MOVZWL  FAO_DESC, R0                                     ;
                                       50          57  C0 00576          ADDL2   LINE_SIZE, R0                                    ;
                                       59          50  D1 00579          CMPL    R0, WIDTH                                        ;
                                                   22  1B 0057C          BLEQU   51$                                              ;
                                                   5B  D5 0057E          TSTL    TERM_LENGTH                                      ;
                                                   0F  15 00580          BLEQ    50$                                              ;
            0A5C CE46       08  BE              5B  28 00582          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]         ;
                                       50      14  BC  3C 0058A          MOVZWL  @TERM_DESC, R0                                   ;
                                       56          50  C0 0058E          ADDL2   R0, SIZE                                         ;
        5A              20              6E          00  2C 00591 50$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]              ;
                                                0A5C CE46       00596                                                            ;
                                       56          5A  C0 0059A          ADDL2   INDENT, SIZE                                     ;
                                       57          5A  D0 0059D          MOVL    INDENT, LINE_SIZE                                ;
                                   18  AE    0A54  CE  3C 005A0 51$:     MOVZWL  FAO_DESC, 24(SP)                                 ;
                                       57      18  AE  C0 005A6          ADDL2   24(SP), LINE_SIZE                                ;
            0A5C CE46       0A58    DE      18  AE  28 005AA          MOVC3   24(SP), @FAO_DESC+4, BUFFER[SIZE]                ; 1056
                                       56      18  AE  C0 005B4          ADDL2   24(SP), SIZE                                     ; 1057
                                       2B      28  AE  E9 005B8          BLBC    40(SP), 53$                                      ; 1058
                                       50      01  A7  9E 005BC          MOVAB   1(R7), R0                                        ;
                                       59          50  D1 005C0          CMPL    R0, WIDTH                                        ;
                                                   22  1B 005C3          BLEQU   53$                                              ;
                                                   5B  D5 005C5          TSTL    TERM_LENGTH                                      ;
                                                   0F  15 005C7          BLEQ    52$                                              ;
            0A5C CE46       08  BE              5B  28 005C9          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]         ;
                                       50      14  BC  3C 005D1          MOVZWL  @TERM_DESC, R0                                   ;
                                       56          50  C0 005D5          ADDL2   R0, SIZE                                         ;
        5A              20              6E          00  2C 005D8 52$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]              ;
                                                0A5C CE46       005DD                                                            ;
                                       56          5A  C0 005E1          ADDL2   INDENT, SIZE                                     ;
                                       57          5A  D0 005E4          MOVL    INDENT, LINE_SIZE                                ;
                                                   57  D6 005E7 53$:     INCL    LINE_SIZE                                        ;
                                0A5C CE46 00000000'    EF  90 005E9          MOVB    P.ADR, BUFFER[SIZE]                      ;
                                                   56  D6 005F3          INCL    SIZE                                             ;
    FF44                58              01      1C  AE  F1 005F5 54$:     ACBL    28(SP), #1, J, 49$                               ; 1043
                            0A5B CE46               2C  90 005FC          MOVB    #44, BUFFER-1[SIZE]                              ; 1060
                                                 0718   31 00602          BRW     126$                                             ; 1037
                                       02      18  AE  91 00605 55$:     CMPB    24(SP), #2                                       ; 1066
                                                   40  12 00609          BNEQ    58$                                              ;
                                       2B      28  AE  E9 0060B          BLBC    40(SP), 57$                                      ; 1067
                                       50      0B  A7  9E 0060F          MOVAB   11(R7), R0                                       ;
                                       59          50  D1 00613          CMPL    R0, WIDTH                                        ;
                                                   22  1B 00616          BLEQU   57$                                              ;
                                                   5B  D5 00618          TSTL    TERM_LENGTH                                      ;
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                                                 0F  15 0061A          BLEQ    56$                                                                 ;
                0A5C CE46        08     BE       5B  28 0061C          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                      ;
                                50     14  BC   3C  00624          MOVZWL  @TERM_DESC, R0                                                      ;
                                56           50  C0  00628          ADDL2   R0, SIZE                                                            ;
          5A          20        6E           00  2C  0062B 56$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                                 ;
                                         0A5C CE46    00630                                                                                   ;
                                56           5A  C0  00634          ADDL2   INDENT, SIZE                                                        ;
                                57           5A  D0  00637          MOVL    INDENT, LINE_SIZE                                                   ;
                                57           0B  C0  0063A 57$:     ADDL2   #11, LINE_SIZE                                                      ;
                0A5C CE46 00000000'  EF      0B  28  0063D          MOVC3   #11, P.ADD, BUFFER[SIZE]                                            ;
                                56           0B  C0  00648          ADDL2   #11, SIZE                                                           ;
                                03     18    AE  91  0064B 58$:     CMPB    24(SP), #3                                                  ; 1068
                                               40  12  0064F          BNEQ    61$                                                                 ;
                                2B     28    AE  E9  00651          BLBC    40(SP), 60$                                                 ; 1069
                                50     0B    A7  9E  00655          MOVAB   11(R7), R0                                                          ;
                                59           50  D1  00659          CMPL    R0, WIDTH                                                           ;
                                               22  1B  0065C          BLEQU   60$                                                                 ;
                                               5B  D5  0065E          TSTL    TERM_LENGTH                                                         ;
                                               0F  15  00660          BLEQ    59$                                                                 ;
                0A5C CE46        08     BE       5B  28  00662          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                      ;
                                50     14  BC   3C  0066A          MOVZWL  @TERM_DESC, R0                                                      ;
                                56           50  C0  0066E          ADDL2   R0, SIZE                                                            ;
          5A          20        6E           00  2C  00671 59$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                                 ;
                                         0A5C CE46    00676                                                                                   ;
                                56           5A  C0  0067A          ADDL2   INDENT, SIZE                                                        ;
                                57           5A  D0  0067D          MOVL    INDENT, LINE_SIZE                                                   ;
                                57           0B  C0  00680 60$:     ADDL2   #11, LINE_SIZE                                                      ;
                0A5C CE46 00000000'  EF      0B  28  00683          MOVC3   #11, P.ADD, BUFFER[SIZE]                                            ;
                                56           0B  C0  0068E          ADDL2   #11, SIZE                                                           ;
                                04     18    AE  91  00691 61$:     CMPB    24(SP), #4                                                  ; 1070
                                               40  12  00695          BNEQ    64$                                                                 ;
                                2B     28    AE  E9  00697          BLBC    40(SP), 63$                                                 ; 1071
                                50     0B    A7  9E  0069B          MOVAB   11(R7), R0                                                          ;
                                59           50  D1  0069F          CMPL    R0, WIDTH                                                           ;
                                               22  1B  006A2          BLEQU   63$                                                                 ;
                                               5B  D5  006A4          TSTL    TERM_LENGTH                                                         ;
                                               0F  15  006A6          BLEQ    62$                                                                 ;
                0A5C CE46        08     BE       5B  28  006A8          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                      ;
                                50     14  BC   3C  006B0          MOVZWL  @TERM_DESC, R0                                                      ;
                                56           50  C0  006B4          ADDL2   R0, SIZE                                                            ;
          5A          20        6E           00  2C  006B7 62$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                                 ;
                                         0A5C CE46    006BC                                                                                   ;
                                56           5A  C0  006C0          ADDL2   INDENT, SIZE                                                        ;
                                57           5A  D0  006C3          MOVL    INDENT, LINE_SIZE                                                   ;
                                57           0B  C0  006C6 63$:     ADDL2   #11, LINE_SIZE                                                      ;
                0A5C CE46 00000000'  EF      0B  28  006C9          MOVC3   #11, P.ADD, BUFFER[SIZE]                                            ;
                                56           0B  C0  006D4          ADDL2   #11, SIZE                                                           ;
                                31     28    AE  E9  006D7 64$:     BLBC    40(SP), 66$                                                 ; 1072
                                50   FF00    CD  9A  006DB          MOVZBL  LOCAL_ACE, R0                                                       ;
                                50     FC A047   9E  006E0          MOVAB   -4(R0)[LINE_SIZE], R0                                               ;
                                59           50  D1  006E5          CMPL    R0, WIDTH                                                           ;
                                               22  1B  006E8          BLEQU   66$                                                                 ;
                                               5B  D5  006EA          TSTL    TERM_LENGTH                                                         ;
                                               0F  15  006EC          BLEQ    65$                                                                 ;
                0A5C CE46        08     BE       5B  28  006EE          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                      ;
                                50     14  BC   3C  006F6          MOVZWL  @TERM_DESC, R0                                                      ;
                                56           50  C0  006FA          ADDL2   R0, SIZE                                                            ;
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                                 0A5C CE46      007DF
                          56          5A  C0 007E3          ADDL2   INDENT, SIZE
                          57          5A  D0 007E6          MOVL    INDENT, LINE_SIZE
                          57          0E  C0 007E9 74$:     ADDL2   #14, LINE_SIZE
                 0A5C CE46 00000000'  EF      0E  28 007EC  MOVC3   #14, P.ADR, BUFFER[SIZE]
                          56          0E  C0 007F7          ADDL2   #14, SIZE
                          31        28    AE  E9 007FA 75$:     BLBC    40(SP), 77$                                  1088
                          50      FF00    CD  9A 007FE          MOVZBL  LOCAL_ACE, R0
                          50        F8 A047   9E 00803          MOVAB   -8(R0)[LINE_SIZE], R0
                          59          50      D1 00808          CMPL    R0, WIDTH
                                      22      1B 0080B          BLEQU   77$
                                      5B      D5 0080D          TSTL    TERM_LENGTH
                                      0F      15 0080F          BLEQ    76$
                 0A5C CE46        08    BE      5B  28 00811    MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]
                          50        14    BC      3C 00819      MOVZWL  @TERM_DESC, R0
                          56          50      C0 0081D          ADDL2   R0, SIZE
          5A                20          6E      00  2C 00820 76$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]
                                 0A5C CE46      00825
                          56          5A  C0 00829          ADDL2   INDENT, SIZE
                          57          5A  D0 0082C          MOVL    INDENT, LINE_SIZE
                          58      FF00    CD  9A 0082F 77$:     MOVZBL  LOCAL_ACE, R8
                          57        F8 A847   9E 00834          MOVAB   -8(R8)[LINE_SIZE], LINE_SIZE
                          50        F8    A8  9E 00839          MOVAB   -8(R8), R0                                   1089
                 0A5C CE46      FF08    CD      50  28 0083D    MOVC3   R0, LOCAL_ACE+8, BUFFER[SIZE]                1091
                          56        F8 A846   9E 00846          MOVAB   -8(R8)[SIZE], SIZE                           1092
                          2B        28    AE  E9 0084B          BLBC    40(SP), 79$                                  1093
                          50        01    A7  9E 0084F          MOVAB   1(R7), R0
                          59          50      D1 00853          CMPL    R0, WIDTH
                                      22      1B 00856          BLEQU   79$
                                      5B      D5 00858          TSTL    TERM_LENGTH
                                      0F      15 0085A          BLEQ    78$
                 0A5C CE46        08    BE      5B  28 0085C    MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]
                          50        14    BC      3C 00864      MOVZWL  @TERM_DESC, R0
                          56          50      C0 00868          ADDL2   R0, SIZE
          5A                20          6E      00  2C 0086B 78$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]
                                 0A5C CE46      00870
                          56          5A  C0 00874          ADDL2   INDENT, SIZE
                          57          5A  D0 00877          MOVL    INDENT, LINE_SIZE
                          57          D6  90 0087A 79$:     INCL    LINE_SIZE
                 0A5C CE46 00000000'  EF      90  0087C      MOVB    P.ADR, BUFFER[SIZE]
                          56          D6  00886 80$:     INCL    SIZE
                                    0492  31  00888          BRW     126$                                         1037
                          2B        28    AE  E9 0088B 81$:     BLBC    40(SP), 83$                                  1097
                          50        13    A7  9E 0088F          MOVAB   19(R7), R0
                          59          50      D1 00893          CMPL    R0, WIDTH
                                      22      1B 00896          BLEQU   83$
                                      5B      D5 00898          TSTL    TERM_LENGTH
                                      0F      15 0089A          BLEQ    82$
                 0A5C CE46        08    BE      5B  28 0089C    MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]
                          50        14    BC      3C 008A4      MOVZWL  @TERM_DESC, R0
                          56          50      C0 008A8          ADDL2   R0, SIZE
          5A                20          6E      00  2C 008AB 82$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]
                                 0A5C CE46      008B0
                          56          5A  C0 008B4          ADDL2   INDENT, SIZE
                          57          5A  D0 008B7          MOVL    INDENT, LINE_SIZE
                          57          13  C0 008BA 83$:     ADDL2   #19, LINE_SIZE
                 0A5C CE46 00000000'  EF      13  28 008BD  MOVC3   #19, P.ADS, BUFFER[SIZE]
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                                 2B      28    AE   E9 009BA          BLBC    40(SP), 97$                                    ; 1138
                                 50      01    A7   9E 009BE          MOVAB   1(R7), R0                                      ;
                                 59            50   D1 009C2          CMPL    R0, WIDTH                                      ;
                                               22   1B 009C5          BLEQU   97$                                            ;
                                               5B   D5 009C7          TSTL    TERM_LENGTH                                    ;
                                               0F   15 009C9          BLEQ    96$                                            ;
                        0A5C CE46        08    BE   5B   28 009CB          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]       ;
                                 50      14    BC   3C 009D3          MOVZWL  @TERM_DESC, R0                                 ;
                                 56            50   C0 009D7          ADDL2   R0, SIZE                                       ;
                     5A                  20    6E   00   2C 009DA 96$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]            ;
                                                  0A5C CE46      009DF                                                          ;
                                 56            5A   C0 009E3          ADDL2   INDENT, SIZE                                   ;
                                 57            5A   D0 009E6          MOVL    INDENT, LINE_SIZE                              ;
                                               57   D6 009E9 97$:     INCL    LINE_SIZE                                      ;
                              0A5C CE46 00000000'  EF   90 009EB          MOVB    P.AE3, BUFFER[SIZE]                            ;
                                               56   D6 009F5          INCL    SIZE                                           ;
                  FED0       1C    AE            01   03   F1 009F7          ACBL    #3, #1, K, 84$                         ; 1098
                                                  031C 31   009FE          BRW     126$                                   ; 1037
                                 2B      28    AE   E9 00A01 98$:     BLBC    40(SP), 100$                                   ; 1143
                                 50      0F    A7   9E 00A05          MOVAB   15(R7), R0                                     ;
                                 59            50   D1 00A09          CMPL    R0, WIDTH                                      ;
                                               22   1B 00A0C          BLEQU   100$                                           ;
                                               5B   D5 00A0E          TSTL    TERM_LENGTH                                    ;
                                               0F   15 00A10          BLEQ    99$                                            ;
                        0A5C CE46        08    BE   5B   28 00A12          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]       ;
                                 50      14    BC   3C 00A1A          MOVZWL  @TERM_DESC, R0                                 ;
                                 56            50   C0 00A1E          ADDL2   R0, SIZE                                       ;
                     5A                  20    6E   00   2C 00A21 99$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]            ;
                                                  0A5C CE46      00A26                                                          ;
                                 56            5A   C0 00A2A          ADDL2   INDENT, SIZE                                   ;
                                 57            5A   D0 00A2D          MOVL    INDENT, LINE_SIZE                              ;
                                               57   C0 00A30 100$:     ADDL2   #15, LINE_SIZE                                 ;
                              0A5C CE46 00000000'  EF   0F   28 00A33          MOVC3   #15, P.AEC, BUFFER[SIZE]               ;
                                               56   0F   C0 00A3E          ADDL2   #15, SIZE                                      ;
                     08                  00    6E   00   2C 00A41          MOVC5   #0, (SP), #0, #8, VOLNAM_DESC          ; 1144
                                                  084C CE        00A46                                                          ;
                     12                  00    6E   00   2C 00A49          MOVC5   #0, (SP), #0, #18, VOLNAM_TEXT         ; 1145
                                                  0838 CE        00A4E                                                          ;
                     08                  00    6E   00   2C 00A51          MOVC5   #0, (SP), #0, #8, FILENAME_DESC        ; 1146
                                                  0830 CE        00A56                                                          ;
                0200 8F                  00    6E   00   2C 00A59          MOVC5   #0, (SP), #0, #512, FILENAME_TEXT      ; 1147
                                                    30 AE        00A60                                                          ;
                              0838 CE 00000000'  EF   05   28 00A62          MOVC3   #5, P.AED, VOLNAM_TEXT                 ; 1149
                     0D                  00  FF04  CD   0C   2C 00A6C          MOVC5   #12, LOCAL_ACE+4, #0, #13, (R3)        ;
                                                  63           00A73                                                          ;
                              0838 CE            12   00   3A 00A74          LOCC    #0, #18, VOLNAM_TEXT                   ; 1151
                                                  02   12 00A7A          BNEQ    101$                                   ;
                                                  51   D4 00A7C          CLRL    R1                                     ;
                                 50      0838 CE   9E 00A7F 101$:     MOVAB   VOLNAM_TEXT, R0                                ;
                              084C CE            51   50   A3 00A83          SUBW3   R0, R1, VOLNAM_DESC                    ;
                                          0850 CE   0838 CE   9E 00A89          MOVAB   VOLNAM_TEXT, VOLNAM_DESC+4             ; 1153
                                          0830 CE   0200 8F   B0 00A90          MOVW    #512, FILENAME_DESC                    ; 1154
                                          0834 CE     30 AE   9E 00A97          MOVAB   FILENAME_TEXT, FILENAME_DESC+4         ; 1155
                                                  0830 CE   9F 00A9D          PUSHAB  FILENAME_DESC                          ; 1156
                                                  0834 CE   9F 00AA1          PUSHAB  FILENAME_DESC                          ;
                                                  FF10 CD   9F 00AA5          PUSHAB  LOCAL_ACE+16                           ;
                                                  0858 CE   9F 00AA9          PUSHAB  VOLNAM_DESC                            ;
```

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                                00000000G  00              04  FB 00AAD          CALLS   #4, LIB$FID_TO_NAME                                      ;
                                           58              50  D0 00AB4          MOVL    R0, LOCAL_STATUS                                        ;
                                           2B        28    AE  E9 00AB7          BLBC    40(SP), 103$                                            ; 1158
                                           50        0F    A7  9E 00ABB          MOVAB   15(R7), R0                                              ;
                                           59              50  D1 00ABF          CMPL    R0, WIDTH                                               ;
                                                           22  1B 00AC2          BLEQU   103$                                                    ;
                                                           5B  D5 00AC4          TSTL    TERM_LENGTH                                             ;
                                                           0F  15 00AC6          BLEQ    102$                                                    ;
                                0A5C CE46            08    BE                    5B  28 00AC8          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE] ;
                                           50        14    BC                    3C  00AD0          MOVZWL  @TERM_DESC, R0                          ;
                                           56              50  C0 00AD4          ADDL2   R0, SIZE                                                ;
                          5A          20                   6E                    00  2C 00AD7 102$:    MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]     ;
                                                                          0A5C CE46      00ADC                                                   ;
                                           56              5A  C0 00AE0          ADDL2   INDENT, SIZE                                            ;
                                           57              5A  D0 00AE3          MOVL    INDENT, LINE_SIZE                                       ;
                                           57              0F  C0 00AE6 103$:    ADDL2   #15, LINE_SIZE                                          ;
                                0A5C CE46 00000000'        EF                    0F  28 00AE9          MOVC3   #15, P.AEE, BUFFER[SIZE]        ;
                                           56              0F  C0 00AF4          ADDL2   #15, SIZE                                               ;
                                           03              58  E8 00AF7          BLBS    LOCAL_STATUS, 104$                                      ; 1159
                                                        00E8  31 00AFA          BRW     117$                                                    ;
                                                 18    AE  0834  CE  D0 00AFD 104$:    MOVL    FILENAME_DESC+4, SEGMENT_START                  ; 1164
                                     50                    59  57  C3 00B03          SUBL3   LINE_SIZE, WIDTH, R0                            ; 1165
                          50    0830   CE                  10  00  ED 00B07          CMPZV   #0, #16, FILENAME_DESC, R0                      ;
                                                           05  1E 00B0E          BGEQU   105$                                                    ;
                                           50        0830  CE  3C 00B10          MOVZWL  FILENAME_DESC, R0                                       ;
                                           58              50  D0 00B15 105$:    MOVL    R0, SEGMENT_SIZE                                        ;
                                                 1C    AE  0830  CE  3C 00B18          MOVZWL  FILENAME_DESC, 28(SP)                           ; 1168
                                                 1C    AE        58  D1 00B1E 106$:    CMPL    SEGMENT_SIZE, 28(SP)                            ;
                                                           2C  1E 00B22          BGEQU   110$                                                    ;
                                           50        01    A8  9E 00B24          MOVAB   1(R8), J                                                ; 1173
                                                           23  11 00B28          BRB     109$                                                    ;
                                           52        18    AE  D0 00B2A 107$:    MOVL    SEGMENT_START, R2                                       ;
                                           51        FF A042   9A 00B2E          MOVZBL  -1(J)[R2], R1                                           ;
                                           3A              51  91 00B33          CMPB    R1, #58                                                 ;
                                                           10  13 00B36          BEQL    108$                                                    ;
                                                 5D    8F        51  91 00B38          CMPB    R1, #93                                         ; 1174
                                                           0A  13 00B3C          BEQL    108$                                                    ;
                                                 2E              51  91 00B3E          CMPB    R1, #46                                         ; 1175
                                                           05  13 00B41          BEQL    108$                                                    ;
                                                 3B              51  91 00B43          CMPB    R1, #59                                         ; 1176
                                                           05  12 00B46          BNEQ    109$                                                    ;
                                           58              50  D0 00B48 108$:    MOVL    J, SEGMENT_SIZE                                         ; 1179
                                                           03  11 00B4B          BRB     110$                                                    ; 1178
                                           DA              50  F5 00B4D 109$:    SOBGTR  J, 107$                                                 ; 1170
                                0A5C CE46            18    BE                    58  28 00B50 110$:    MOVC3   SEGMENT_SIZE, @SEGMENT_START, BUFFER[SIZE] ; 1183
                                           57              58  C0 00B58          ADDL2   SEGMENT_SIZE, LINE_SIZE                                 ; 1184
                                           56              58  C0 00B5B          ADDL2   SEGMENT_SIZE, SIZE                                      ; 1185
                                                 0830  CE        58  A2 00B5E          SUBW2   SEGMENT_SIZE, FILENAME_DESC                     ; 1186
                                                   18  AE        58  C0 00B63          ADDL2   SEGMENT_SIZE, SEGMENT_START                     ; 1187
                                                   1C  AE  0830  CE  3C 00B67          MOVZWL  FILENAME_DESC, 28(SP)                           ; 1188
                                                           1E  15 00B6D          BLEQ    112$                                                    ;
                                                           5B  D5 00B6F          TSTL    TERM_LENGTH                                             ;
                                                           0B  15 00B71          BLEQ    111$                                                    ;
                                0A5C CE46            08    BE                    5B  28 00B73          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE] ;
                                           56              5B  C0 00B7B          ADDL2   TERM_LENGTH, SIZE                                       ;
                          5A          20                   6E                    00  2C 00B7E 111$:    MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]     ;
                                                                          0A5C CE46      00B83                                                   ;
```

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                                56              5A  C0 00B87           ADDL2   INDENT, SIZE                                                    ;
                                57              5A  D0 00B8A           MOVL    INDENT, LINE_SIZE                                               ;
                          50    59              57  C3 00B8D 112$:     SUBL3   LINE_SIZE, WIDTH, R0                                    ; 1189
                             1C AE              50  D1 00B91           CMPL    R0, 28(SP)                                                      ;
                                                04  1B 00B95           BLEQU   113$                                                    ;
                                50          1C  AE  D0 00B97           MOVL    28(SP), R0                                              ;
                                58              50  D0 00B9B 113$:     MOVL    R0, SEGMENT_SIZE                                        ;
                                            1C  AE  D5 00B9E           TSTL    28(SP)                                                  ; 1191
                                                03  15 00BA1           BLEQ    114$                                                    ;
                                             FF78   31 00BA3           BRW     106$                                                    ;
                                2B          28  AE  E9 00BA6 114$:     BLBC    40(SP), 116$                                            ; 1192
                                50          01  A7  9E 00BAA           MOVAB   1(R7), R0                                               ;
                                59              50  D1 00BAE           CMPL    R0, WIDTH                                               ;
                                                22  1B 00BB1           BLEQU   116$                                                    ;
                                                5B  D5 00BB3           TSTL    TERM_LENGTH                                             ;
                                                0F  15 00BB5           BLEQ    115$                                                    ;
                      0A5C CE46         08      5B  28 00BB7           MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                ;
                                50          14  BC  3C 00BBF           MOVZWL  @TERM_DESC, R0                                          ;
                                56              50  C0 00BC3           ADDL2   R0, SIZE                                                ;
                   5A     20                   6E  00  2C 00BC6 115$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                     ;
                                         0A5C CE46      00BCB                                                                           ;
                                56              5A  C0 00BCF           ADDL2   INDENT, SIZE                                            ;
                                57              5A  D0 00BD2           MOVL    INDENT, LINE_SIZE                                       ;
                                                57  D6 00BD5 116$:     INCL    LINE_SIZE                                               ;
                             0A5C CE46 00000000'    EF  90 00BD7           MOVB    P.AEF, BUFFER[SIZE]                                     ;
                                                56  D6 00BE1           INCL    SIZE                                                    ;
                                                76  11 00BE3           BRB     120$                                                    ; 1159
                             0A54    CE     0200    8F  B0 00BE5 117$:     MOVW    #512, FAO_DESC                                          ; 1196
                             0A58    CE     0854    CE  9E 00BEC           MOVAB   FAO_BUF, FAO_DESC+4                                     ; 1197
                                            FF14    CD  DD 00BF3           PUSHL   LOCAL_ACE+20                                            ; 1203
                                            FF12    CD  DD 00BF7           PUSHL   LOCAL_ACE+18                                            ;
                                            FF10    CD  DD 00BFB           PUSHL   LOCAL_ACE+16                                            ;
                                            0A60    CE  9F 00BFF           PUSHAB  FAO_DESC                                                ;
                                            0A64    CE  9F 00C03           PUSHAB  FAO_DESC                                                ;
                                        00000000'   EF  9F 00C07           PUSHAB  P.AEG                                                   ;
                                00000000G   00          FB 00C0D           CALLS   #6, SYS$FAO                                             ;
                                            2F      28  AE  E9 00C14           BLBC    40(SP), 119$                                        ; 1204
                                50      0A54        CE  3C 00C18           MOVZWL  FAO_DESC, R0                                            ;
                                50              57  C0 00C1D           ADDL2   LINE_SIZE, R0                                           ;
                                59              50  D1 00C20           CMPL    R0, WIDTH                                               ;
                                                22  1B 00C23           BLEQU   119$                                                    ;
                                                5B  D5 00C25           TSTL    TERM_LENGTH                                             ;
                                                0F  15 00C27           BLEQ    118$                                                    ;
                      0A5C CE46         08      5B  28 00C29           MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                ;
                                50          14  BC  3C 00C31           MOVZWL  @TERM_DESC, R0                                          ;
                                56              50  C0 00C35           ADDL2   R0, SIZE                                                ;
                   5A     20                   6E  00  2C 00C38 118$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                     ;
                                         0A5C CE46      00C3D                                                                           ;
                                56              5A  C0 00C41           ADDL2   INDENT, SIZE                                            ;
                                57              5A  D0 00C44           MOVL    INDENT, LINE_SIZE                                       ;
                                58      0A54        CE  3C 00C47 119$:     MOVZWL  FAO_DESC, R8                                            ;
                                57              58  C0 00C4C           ADDL2   R8, LINE_SIZE                                           ;
                      0A5C CE46         0A58    DE      58  28 00C4F           MOVC3   R8, @FAO_DESC+4, BUFFER[SIZE]                   ; 1205
                                56              58  C0 00C58           ADDL2   R8, SIZE                                                ; 1206
                                            2B      28  AE  E9 00C5B 120$:     BLBC    40(SP), 122$                                        ; 1208
                                50          16  A7  9E 00C5F           MOVAB   22(R7), R0                                              ;
                                59              50  D1 00C63           CMPL    R0, WIDTH                                               ;
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                                                22  1B 00C66          BLEQU   122$                                                    ;
                                                5B  D5 00C68          TSTL    TERM_LENGTH                                             ;
                                                0F  15 00C6A          BLEQ    121$                                                    ;
                    0A5C CE46       08      BE  5B  28 00C6C          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                 ;
                                            50      14  BC  3C 00C74  MOVZWL  @TERM_DESC, R0                                          ;
                                            56      50  C0 00C78      ADDL2   R0, SIZE                                                ;
                5A          20              6E      00  2C 00C7B 121$: MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                   ;
                                                0A5C CE46   00C80                                                                     ;
                                            56      5A  C0 00C84      ADDL2   INDENT, SIZE                                            ;
                                            57      5A  D0 00C87      MOVL    INDENT, LINE_SIZE                                       ;
                                            57      16  C0 00C8A 122$: ADDL2   #22, LINE_SIZE                                       ;
                    0A5C CE46 00000000'     EF      16  28 00C8D      MOVC3   #22, P.AEI, BUFFER[SIZE]                                ;
                                            56      16  C0 00C98      ADDL2   #22, SIZE                                               ;
                              0A54      CE      0200    8F  B0 00C9B  MOVW    #512, FAO_DESC                                          ; 1209
                              0A58      CE      0854    CE  9E 00CA2  MOVAB   FAO_BUF, FAO_DESC+4                                     ; 1210
                                                FF18    CD  9F 00CA9  PUSHAB  LOCAL_ACE+24                                            ; 1214
                                                0A58    CE  9F 00CAD  PUSHAB  FAO_DESC                                                ;
                                                0A5C    CE  9F 00CB1  PUSHAB  FAO_DESC                                                ;
                                            00000000'   EF  9F 00CB5  PUSHAB  P.AEJ                                                   ;
                          00000000G     00              04  FB 00CBB  CALLS   #4, SYS$FAO                                            ;
                              085F      CE              3A  90 00CC2  MOVB    #58, FAO_BUF+11                                         ; 1215
                                            20      0854    CE  91 00CC7  CMPB    FAO_BUF, #32                                        ; 1216
                                                08      12 00CCC      BNEQ    123$                                                    ;
                                                0A54    CE  B7 00CCE  DECW    FAO_DESC                                                ; 1219
                                                0A58    CE  D6 00CD2  INCL    FAO_DESC+4                                              ; 1220
                                            2F      28  AE  E9 00CD6 123$: BLBC    40(SP), 125$                                        ; 1222
                                            50      0A54    CE  3C 00CDA  MOVZWL  FAO_DESC, R0                                        ;
                                            50      57  C0 00CDF      ADDL2   LINE_SIZE, R0                                           ;
                                            59      50  D1 00CE2      CMPL    R0, WIDTH                                               ;
                                                22  1B 00CE5          BLEQU   125$                                                    ;
                                                5B  D5 00CE7          TSTL    TERM_LENGTH                                             ;
                                                0F  15 00CE9          BLEQ    124$                                                    ;
                    0A5C CE46       08      BE  5B  28 00CEB          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                 ;
                                            50      14  BC  3C 00CF3  MOVZWL  @TERM_DESC, R0                                          ;
                                            56      50  C0 00CF7      ADDL2   R0, SIZE                                                ;
                5A          20              6E      00  2C 00CFA 124$: MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                   ;
                                                0A5C CE46   00CFF                                                                     ;
                                            56      5A  C0 00D03      ADDL2   INDENT, SIZE                                            ;
                                            57      5A  D0 00D06      MOVL    INDENT, LINE_SIZE                                       ;
                                            58      0A54    CE  3C 00D09 125$: MOVZWL  FAO_DESC, R8                                   ;
                                            57      58  C0 00D0E      ADDL2   R8, LINE_SIZE                                           ;
                    0A5C CE46       0A58    DE      58  28 00D11      MOVC3   R8, @FAO_DESC+4, BUFFER[SIZE]                           ; 1223
                                            56      58  C0 00D1A      ADDL2   R8, SIZE                                                ; 1224
                                            58      FF02    CD  B0 00D1D 126$: MOVW   LOCAL_ACE+2, FLAGS                              ; 1293
                                            03      24  AE  E9 00D22  BLBC    AUDIT_MASK, 127$                                        ; 1294
                                            58      03  8A 00D26      BICB2   #3, FLAGS                                               ; 1295
                                                58  B5 00D29 127$: TSTW    FLAGS                                                   ; 1296
                                                03  12 00D2B      BNEQ    128$                                                    ;
                                                01B6    31 00D2D      BRW     146$                                                    ;
                                            2B      28  AE  E9 00D30 128$: BLBC    40(SP), 130$                                        ; 1299
                                            50      08  A7  9E 00D34      MOVAB   8(R7), R0                                           ;
                                            59      50  D1 00D38      CMPL    R0, WIDTH                                               ;
                                                22  1B 00D3B          BLEQU   130$                                                    ;
                                                5B  D5 00D3D          TSTL    TERM_LENGTH                                             ;
                                                0F  15 00D3F          BLEQ    129$                                                    ;
                    0A5C CE46       08      BE  5B  28 00D41          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                 ;
                                            50      14  BC  3C 00D49  MOVZWL  @TERM_DESC, R0                                          ;
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                                 56                 50  C0 00D4D              ADDL2   R0, SIZE                                                    ;
                5A                 20            6E   00  2C 00D50 129$:      MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                         ;
                                                      0A5C CE46      00D55                                                                       ;
                                 56                 5A  C0 00D59              ADDL2   INDENT, SIZE                                                ;
                                 57                 5A  D0 00D5C              MOVL    INDENT, LINE_SIZE                                           ;
                                 57                 08  C0 00D5F 130$:      ADDL2   #8, LINE_SIZE                                               ;
                      0A5C CE46 00000000'       EF   08  28 00D62              MOVC3   #8, P.AFA, BUFFER[SIZE]                                     ;
                                 56                 08  C0 00D6D              ADDL2   #8, SIZE                                                    ;
                         40      58                 08  E5 00D70              BBCC    #8, FLAGS, 133$                                             ; 1300
                                 2B           28    AE  E9 00D74              BLBC    40(SP), 132$                                                ; 1301
                                 50           08    A7  9E 00D78              MOVAB   8(R7), R0                                                   ;
                                 59                 50  D1 00D7C              CMPL    R0, WIDTH                                                   ;
                                                    22  1B 00D7F              BLEQU   132$                                                        ;
                                                    5B  D5 00D81              TSTL    TERM_LENGTH                                                 ;
                                                    0F  15 00D83              BLEQ    131$                                                        ;
                      0A5C CE46       08        BE   5B  28 00D85              MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                    ;
                                 50           14    BC  3C 00D8D              MOVZWL  @TERM_DESC, R0                                              ;
                                 56                 50  C0 00D91              ADDL2   R0, SIZE                                                    ;
                5A                 20            6E   00  2C 00D94 131$:      MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                         ;
                                                      0A5C CE46      00D99                                                                       ;
                                 56                 5A  C0 00D9D              ADDL2   INDENT, SIZE                                                ;
                                 57                 5A  D0 00DA0              MOVL    INDENT, LINE_SIZE                                           ;
                                 57                 08  C0 00DA3 132$:      ADDL2   #8, LINE_SIZE                                               ;
                      0A5C CE46 00000000'       EF   08  28 00DA6              MOVC3   #8, P.AFB, BUFFER[SIZE]                                     ;
                                 56                 08  C0 00DB1              ADDL2   #8, SIZE                                                    ;
                         40      58                 0A  E5 00DB4 133$:      BBCC    #10, FLAGS, 136$                                            ; 1302
                                 2B           28    AE  E9 00DB8              BLBC    40(SP), 135$                                                ; 1303
                                 50           07    A7  9E 00DBC              MOVAB   7(R7), R0                                                   ;
                                 59                 50  D1 00DC0              CMPL    R0, WIDTH                                                   ;
                                                    22  1B 00DC3              BLEQU   135$                                                        ;
                                                    5B  D5 00DC5              TSTL    TERM_LENGTH                                                 ;
                                                    0F  15 00DC7              BLEQ    134$                                                        ;
                      0A5C CE46       08        BE   5B  28 00DC9              MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                    ;
                                 50           14    BC  3C 00DD1              MOVZWL  @TERM_DESC, R0                                              ;
                                 56                 50  C0 00DD5              ADDL2   R0, SIZE                                                    ;
                5A                 20            6E   00  2C 00DD8 134$:      MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                         ;
                                                      0A5C CE46      00DDD                                                                       ;
                                 56                 5A  C0 00DE1              ADDL2   INDENT, SIZE                                                ;
                                 57                 5A  D0 00DE4              MOVL    INDENT, LINE_SIZE                                           ;
                                 57                 07  C0 00DE7 135$:      ADDL2   #7, LINE_SIZE                                               ;
                      0A5C CE46 00000000'       EF   07  28 00DEA              MOVC3   #7, P.AFC, BUFFER[SIZE]                                     ;
                                 56                 07  C0 00DF5              ADDL2   #7, SIZE                                                    ;
                         40      58                 09  E5 00DF8 136$:      BBCC    #9, FLAGS, 139$                                             ; 1304
                                 2B           28    AE  E9 00DFC              BLBC    40(SP), 138$                                                ; 1305
                                 50           0A    A7  9E 00E00              MOVAB   10(R7), R0                                                  ;
                                 59                 50  D1 00E04              CMPL    R0, WIDTH                                                   ;
                                                    22  1B 00E07              BLEQU   138$                                                        ;
                                                    5B  D5 00E09              TSTL    TERM_LENGTH                                                 ;
                                                    0F  15 00E0B              BLEQ    137$                                                        ;
                      0A5C CE46       08        BE   5B  28 00E0D              MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                    ;
                                 50           14    BC  3C 00E15              MOVZWL  @TERM_DESC, R0                                              ;
                                 56                 50  C0 00E19              ADDL2   R0, SIZE                                                    ;
                5A                 20            6E   00  2C 00E1C 137$:      MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                         ;
                                                      0A5C CE46      00E21                                                                       ;
                                 56                 5A  C0 00E25              ADDL2   INDENT, SIZE                                                ;
                                 57                 5A  D0 00E28              MOVL    INDENT, LINE_SIZE                                           ;
                                 57                 0A  C0 00E2B 138$:      ADDL2   #10, LINE_SIZE                                              ;
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                 0A5C CE46 00000000'  EF                  0A  28 00E2E             MOVC3   #10, P.AFD, BUFFER[SIZE]                    ;
                                      56                  0A  C0 00E39             ADDL2   #10, SIZE                                   ;
                       40             58                  0B  E5 00E3C 139$:       BBCC    #11, FLAGS, 142$                            ; 1306
                                      2B           28     AE  E9 00E40             BLBC    40(SP), 141$                                ; 1307
                                      50           0C     A7  9E 00E44             MOVAB   12(R7), R0                                  ;
                                      59                  50  D1 00E48             CMPL    R0, WIDTH                                   ;
                                                          22  1B 00E4B             BLEQU   141$                                        ;
                                                          5B  D5 00E4D             TSTL    TERM_LENGTH                                 ;
                                                          0F  15 00E4F             BLEQ    140$                                        ;
                 0A5C CE46        08  BE                  5B  28 00E51             MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]    ;
                                      50           14     BC  3C 00E59             MOVZWL  @TERM_DESC, R0                              ;
                                      56                  50  C0 00E5D             ADDL2   R0, SIZE                                    ;
              5A       20             6E                  00  2C 00E60 140$:       MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]         ;
                                                  0A5C CE46      00E65               ;
                                      56                  5A  C0 00E69             ADDL2   INDENT, SIZE                                ;
                                      57                  5A  D0 00E6C             MOVL    INDENT, LINE_SIZE                           ;
                                      57                  0C  C0 00E6F 141$:       ADDL2   #12, LINE_SIZE                              ;
                 0A5C CE46 00000000'  EF                  0C  28 00E72             MOVC3   #12, P.AFE, BUFFER[SIZE]                    ;
                                      56                  0C  C0 00E7D             ADDL2   #12, SIZE                                   ;
                                                          58  B5 00E80 142$:       TSTW    FLAGS                                       ; 1308
                                                          5C  13 00E82             BEQL    145$                                        ;
                                      2B           28     AE  E9 00E84             BLBC    40(SP), 144$                                ; 1311
                                      50           07     A7  9E 00E88             MOVAB   7(R7), R0                                   ;
                                      59                  50  D1 00E8C             CMPL    R0, WIDTH                                   ;
                                                          22  1B 00E8F             BLEQU   144$                                        ;
                                                          5B  D5 00E91             TSTL    TERM_LENGTH                                 ;
                                                          0F  15 00E93             BLEQ    143$                                        ;
                 0A5C CE46        08  BE                  5B  28 00E95             MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]    ;
                                      50           14     BC  3C 00E9D             MOVZWL  @TERM_DESC, R0                              ;
                                      56                  50  C0 00EA1             ADDL2   R0, SIZE                                    ;
              5A       20             6E                  00  2C 00EA4 143$:       MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]         ;
                                                  0A5C CE46      00EA9               ;
                                      56                  5A  C0 00EAD             ADDL2   INDENT, SIZE                                ;
                                      57                  5A  D0 00EB0             MOVL    INDENT, LINE_SIZE                           ;
                                      57                  07  C0 00EB3 144$:       ADDL2   #7, LINE_SIZE                               ;
                       FEF8     CD                      07  B0 00EB6             MOVW    #7, FAO_DESCR                               ; 1312
                       FEFC     CD          0A5C CE46   9E  00EBB                MOVAB   BUFFER[SIZE], FAO_DESCR+4                   ; 1313
                                7E                      58  3C 00EC3             MOVZWL  FLAGS, -(SP)                                ; 1317
                                                  FEF8    CD  9F 00EC6             PUSHAB  FAO_DESCR                                   ;
                                                  FEF8    CD  9F 00ECA             PUSHAB  FAO_DESCR                                   ;
                                              00G00000'   EF  9F 00ECE             PUSHAB  P.AFF                                       ;
                     00000000G    00                      04  FB 00ED4             CALLS   #4, SYS$FAO                                 ;
                                      56                  07  C0 00EDB             ADDL2   #7, SIZE                                    ; 1318
                                                          06  11 00EDE             BRB     146$                                        ; 1308
                           0A5B CE46                      2C  90 00EE0 145$:       MOVB    #44, BUFFER-1[SIZE]                         ; 1320
                                      03           20     AE  E8 00EE6 146$:       BLBS    ACCESS_MASK, 147$                           ; 1325
                                                  01D6    31  00EEA             BRW     171$                                        ;
                                                  FF04    CD  D5 00EED 147$:       TSTL    LOCAL_ACE+4                                 ; 1328
                                                          12  12 00EF1             BNEQ    150$                                        ;
                                      03           24     AE  E8 00EF3             BLBS    AUDIT_MASK, 149$                            ; 1329
                                                  0189    31  00EF7 148$:          BRW     168$                                        ;
                                      06          FF02    CD  E8 00EFA 149$:       BLBS    LOCAL_ACE+2, 150$                           ; 1330
                     F2               FF02        CD      01  E1 00EFF             BBC     #1, LOCAL_ACE+2, 148$                       ; 1331
                                      2B           28     AE  E9 00F05 150$:       BLBC    40(SP), 152$                                ; 1334
                                      50           07     A7  9E 00F09             MOVAB   7(R7), R0                                   ;
                                      59                  50  D1 00F0D             CMPL    R0, WIDTH                                   ;
                                                          22  1B 00F10             BLEQU   152$                                        ;
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                                                 5B  D5 00F12          TSTL    TERM_LENGTH                                                    ;
                                                 0F  15 00F14          BLEQ    151$                                                           ;
                    0A5C CE46       08       BE      5B  28 00F16          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]                ;
                                             50      14  BC  3C 00F1E          MOVZWL  @TERM_DESC, R0                                         ;
                                             56          50  C0 00F22          ADDL2   R0, SIZE                                               ;
                5A          20               6E          00  2C 00F25 151$:    MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                    ;
                                                     0A5C CE46   00F2A                                                                      ;
                                             56          5A  C0 00F2E          ADDL2   INDENT, SIZE                                           ;
                                             57          5A  D0 00F31          MOVL    INDENT, LINE_SIZE                                      ;
                                             57          07  C0 00F34 152$:    ADDL2   #7, LINE_SIZE                                          ;
                    0A5C CE46 00000000'      EF          07  28 00F37          MOVC3   #7, P.AFA, BUFFER[SIZE]                                ;
                                             56          07  C0 00F42          ADDL2   #7, SIZE                                               ;
                                                         58  D4 00F45          CLRL    J                                                      ; 1335
                            03      FF04     CD          58  E0 00F47 153$:    BBS     J, LOCAL_ACE+4, 154$                                   ; 1338
                                                     0099    31 00F4D          BRW     160$                                                   ;
                                             50 00000000'    EF  D0 00F50 154$:    MOVL    BIT_NAME_TABLE, R0                             ; 1341
                                                         28  13 00F57          BEQL    156$                                                   ;
                                                       6048  7F 00F59          PUSHAQ  (R0)[J]                                                ; 1344
                            9E                   08          00  0C 00F5C          PROBER  #0, #8, @(SP)+                                         ;
                                                         1C  13 00F60          BEQL    155$                                                   ;
                                                 1C      AE    6048  7E 00F62          MOVAQ   (R0)[J], BIT_NAME_DESC                         ; 1345
                            54                   1C      AE      04  C1 00F67          ADDL3   #4, BIT_NAME_DESC, R4                          ; 1347
                                                 50          64  D0 00F6C          MOVL    (R4), R0                                       ;
                                                 51      1C  BE  3C 00F6F          MOVZWL  @BIT_NAME_DESC, R1                             ;
                                                         53  D4 00F73          CLRL    R3                                                     ;
                                                 000000000G  00  16 00F75          JSB     EXE$PROBER                                     ;
                                                 0C          50  E8 00F7B          BLBS    R0, 157$                                       ;
                                                     0183    31 00F7E 155$:    BRW     172$                                           ; 1349
                                                 1C      AE 00000000'EF48  D0 00F81 156$:    MOVL    DEFAULT_BITS[J], BIT_NAME_DESC         ; 1351
                                                 30      28  AE  E9 00F8A 157$:    BLBC    40(SP), 159$                                   ; 1352
                                                 50      1C  BE  3C 00F8E          MOVZWL  @BIT_NAME_DESC, R0                             ;
                                                 50      01 A047 9E 00F92          MOVAB   1(R0)[LINE_SIZE], R0                           ;
                                                 59          50  D1 00F97          CMPL    R0, WIDTH                                      ;
                                                             22  1B 00F9A          BLEQU   159$                                           ;
                                                             5B  D5 00F9C          TSTL    TERM_LENGTH                                    ;
                                                             0F  15 00F9E          BLEQ    158$                                           ;
                        0A5C CE46       08       BE          5B  28 00FA0          MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]       ;
                                                 50      14  BC  3C 00FA8          MOVZWL  @TERM_DESC, R0                                 ;
                                                 56          50  C0 00FAC          ADDL2   R0, SIZE                                       ;
                    5A          20               6E          00  2C 00FAF 158$:    MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]            ;
                                                         0A5C CE46   00FB4                                                              ;
                                                 56          5A  C0 00FB8          ADDL2   INDENT, SIZE                                   ;
                                                 57          5A  D0 00FBB          MOVL    INDENT, LINE_SIZE                              ;
                                                 20      1C  BE  3C 00FBE 159$:    MOVZWL  @BIT_NAME_DESC, 32(SP)                         ;
                                50               20      AE      01  C1 00FC3          ADDL3   #1, 32(SP), R0                                 ;
                                                 57          50  C0 00FC8          ADDL2   R0, LINE_SIZE                                  ;
                                7E               1C      AE      04  C1 00FCB          ADDL3   #4, BIT_NAME_DESC, -(SP)                       ; 1354
                                                             9E  DD 00FD0          PUSHL   @(SP)+                                         ;
                        0A5C CE46                9E      24  AE  28 00FD2          MOVC3   36(SP), @(SP)+, BUFFER[SIZE]                   ;
                                50               56      20  AE  C1 00FDA          ADDL3   32(SP), SIZE, R0                               ; 1355
                                             0A5C CE40           2B  90 00FDF          MOVB    #43, BUFFER[R0]                                ;
                                                 56      01  A0  9E 00FE5          MOVAB   1(R0), SIZE                                    ; 1356
                FF58                58               01          1F  F1 00FE9 160$:    ACBL    #31, #1, J, 153$                               ; 1335
                                                 03      24  AE  E8 00FEF          BLBS    AUDIT_MASK, 162$                               ; 1359
                                                         00CD    31 00FF3 161$:    BRW     171$                                           ;
                                                 40      FF02 CD E9 00FF6 162$:    BLBC    LOCAL_ACE+2, 165$                              ; 1362
                                                 2B      28  AE  E9 00FFB          BLBC    40(SP), 164$                                   ;
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                                50      08    A7  9E 00FFF           MOVAB   8(R7), R0                                                   ;
                                59            50  D1 01003           CMPL    R0, WIDTH                                                   ;
                                              22  1B 01006           BLEQU   164$                                                        ;
                                              5B  D5 01008           TSTL    TERM_LENGTH                                                 ;
                                              0F  15 0100A           BLEQ    163$                                                        ;
                    0A5C CE46         08      BE                     5B  28 0100C           MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]             ;
                                50      14    BC  3C 01014           MOVZWL  @TERM_DESC, R0                                              ;
                                56            50  C0 01018           ADDL2   R0, SIZE                                                    ;
                5A                20          6E                     00  2C 0101B 163$:    MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                  ;
                                                    0A5C CE46              01020                                                           ;
                                56            5A  C0 01024           ADDL2   INDENT, SIZE                                                ;
                                57            5A  D0 01027           MOVL    INDENT, LINE_SIZE                                           ;
                                57            08  C0 0102A 164$:     ADDL2   #8, LINE_SIZE                                               ;
                    0A5C CE46 00000000'       EF                     08  28 0102D           MOVC3   #8, P.AFI, BUFFER[SIZE]                             ;
                                56            08  C0 01038           ADDL2   #8, SIZE                                                    ;
                          B2      FF02        CD                     01  E1 0103B 165$:     BBC     #1, LOCAL_ACE+2, 161$                       ; 1363
                                2B      28    AE                     E9  01041              BLBC    40(SP), 167$                                ;
                                50      08    A7                     9E  01045              MOVAB   8(R7), R0                                   ;
                                59            50                     D1  01049              CMPL    R0, WIDTH                                   ;
                                              22                     1B  0104C              BLEQU   167$                                        ;
                                              5B                     D5  0104E              TSTL    TERM_LENGTH                                 ;
                                              0F                     15  01050              BLEQ    166$                                        ;
                    0A5C CE46         08      BE                     5B  28 01052           MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]             ;
                                50      14    BC                     3C  0105A              MOVZWL  @TERM_DESC, R0                              ;
                                56            50                     C0  0105E              ADDL2   R0, SIZE                                    ;
                5A                20          6E                     00  2C 01061 166$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                  ;
                                                    0A5C CE46              01066                                                           ;
                                56            5A                     C0  0106A              ADDL2   INDENT, SIZE                                ;
                                57            5A                     D0  0106D              MOVL    INDENT, LINE_SIZE                           ;
                                57            08                     C0  01070 167$:        ADDL2   #8, LINE_SIZE                               ;
                    0A5C CE46 00000000'       EF                     08  28 01073           MOVC3   #8, P.AFJ, BUFFER[SIZE]                             ;
                                56            08                     C0  0107E              ADDL2   #8, SIZE                                    ;
                                              40                     11  01081              BRB     171$                                        ; 1328
                                2B      28    AE                     E9  01083 168$:        BLBC    40(SP), 170$                                ; 1366
                                50      0C    A7                     9E  01087              MOVAB   12(R7), R0                                  ;
                                59            50                     D1  0108B              CMPL    R0, WIDTH                                   ;
                                              22                     1B  0108E              BLEQU   170$                                        ;
                                              5B                     D5  01090              TSTL    TERM_LENGTH                                 ;
                                              0F                     15  01092              BLEQ    169$                                        ;
                    0A5C CE46         08      BE                     5B  28 01094           MOVC3   TERM_LENGTH, @TERM_POINTER, BUFFER[SIZE]             ;
                                50      14    BC                     3C  0109C              MOVZWL  @TERM_DESC, R0                              ;
                                56            50                     C0  010A0              ADDL2   R0, SIZE                                    ;
                5A                20          6E                     00  2C 010A3 169$:     MOVC5   #0, (SP), #32, INDENT, BUFFER[SIZE]                  ;
                                                    0A5C CE46              010A8                                                           ;
                                56            5A                     C0  010AC              ADDL2   INDENT, SIZE                                ;
                                57            5A                     D0  010AF              MOVL    INDENT, LINE_SIZE                           ;
                                57            0C                     C0  010B2 170$:        ADDL2   #12, LINE_SIZE                              ;
                    0A5C CE46 00000000'       EF                     0C  28 010B5           MOVC3   #12, P.AFK, BUFFER[SIZE]                            ;
                                56            0C                     C0  010C0              ADDL2   #12, SIZE                                   ;
                          0A5B CE46                                    29  90 010C3 171$:     MOVB    #41, BUFFER-1[SIZE]                         ; 1371
                      0C  BC              08                           00  0C 010C9           PROBER  #0, #8, @ACL_STRING                         ; 1375
                                                                       34  13 010CE           BEQL    172$                                        ;
                          54        0C    AC                           04  C1 010D0           ADDL3   #4, ACL_STRING, R4                          ; 1378
                                50            64                       D0  010D5              MOVL    (R4), R0                                    ;
                                51            6E                       D0  010D8              MOVL    ACL_STRING_LEN, R1                          ;
                                              53                       D4  010DB              CLRL    R3                                          ;
                                    00000000G 00                       16  010DD              JSB     EXE$PROBEW                                  ;
```

```
                                 1E                50  E9 010E3                BLBC    R0, 172$                                    ;
                          57      0C               AC  04 C1 010E6           ADDL3   #4, ACL_STRING, R7                        ; 1379
                    6E    00    0A5C               CE  56 2C 010EB           MOVC5   SIZE, BUFFER, #0, ACL_STRING_LEN, @(R7)+    ;
                                                       97    010F2                                                               ;
                                 50        08        AC  D0 010F3              MOVL    ACL_LENGTH, R0                              ; 1383
                                                       0F  13 010F7              BEQL    173$                                        ;
                          60     04                     00  0D 010F9           PROBEW  #0, #4, (R0)                            ; 1384
                                                       05  13 010FD              BEQL    172$                                        ;
                                 60                    56  D0 010FF           MOVL    SIZE, (R0)                              ; 1385
                                                       04  11 01102              BRB     173$                                        ;
                                 50                    0C  D0 01104 172$:        MOVL    #12, R0                                     ;
                                                           04 01107              RET                                                 ;
                                 6E                    56  D1 01108 173$:        CMPL    SIZE, ACL_STRING_LEN                    ; 1386
                                                       06  15 0110B              BLEQ    175$                                        ;
                                 50      0601          8F  3C 0110D 174$:        MOVZWL  #1537, R0                               ; 1387
                                                           04 01112              RET                                                 ;
                                 50                    01  D0 01113 175$:        MOVL    #1, R0                                      ;
                                                           04 01116              RET                                             ; 1389

; Routine Size:  4375 bytes,    Routine Base:  $CODE$ + 0201
```

```
;1395     1390  1 %SBTTL  '$CHANGE_ACL system service'
;1396     1391  1 GLOBAL ROUTINE SYS$CHANGE_ACL (CHANNEL, OBJECT_TYPE, OBJECT_NAME,
;1397     1392  1                                ITEM_LIST, ACCESS_MODE, RESERVED, CONTEXT) =
;1398     1393  1
;1399     1394  1 !++
;1400     1395  1 !
;1401     1396  1 ! FUNCTIONAL DESCRIPTION:
;1402     1397  1 !
;1403     1398  1 !       This routine changes (or reads) the ACL associated with any of the
;1404     1399  1 !       defined objects within the system.
;1405     1400  1 !
;1406     1401  1 !       Note:   Since the length of the ACE is part of the data returned to
;1407     1402  1 !               the caller,  the return length parameter of the item list
;1408     1403  1 !               is unused.
;1409     1404  1 !
;1410     1405  1 !       There are basically two types of objects that can have their ACL
;1411     1406  1 !       twiddled. There are those objects that require an agent to do the work
;1412     1407  1 !       (e.g, files by the XQP) and the others where it is simply necessary to
;1413     1408  1 !       locate the ACL queue segment list head.  In the latter case, the work
;1414     1409  1 !       is done here.
;1415     1410  1 !
;1416     1411  1 ! CALLING SEQUENCE:
;1417     1412  1 !       SYS$CHANGE_ACL (ARG1, ARG2, ARG3, ARG4, ARG5, ARG6, ARG7)
;1418     1413  1 !
;1419     1414  1 ! INPUT PARAMETERS:
;1420     1415  1 !       ARG1: number of the channel assigned to the object or 0 if
;1421     1416  1 !             the object is specified by ARG2 and ARG3
;1422     1417  1 !       ARG2: address of an object type code
;1423     1418  1 !       ARG3: address of an object name descriptor
;1424     1419  1 !       ARG4: address of a list of item descriptors
;1425     1420  1 !       ARG5: address of an access mode longword (used to validate the
;1426     1421  1 !             item list and I/O status block)
;1427     1422  1 !       ARG6: reserved for future use
;1428     1423  1 !       ARG7: address of a context longword
;1429     1424  1 !
;1430     1425  1 ! IMPLICIT INPUTS:
;1431     1426  1 !       none
;1432     1427  1 !
;1433     1428  1 ! OUTPUT PARAMETERS:
;1434     1429  1 !       ARG7:   address of a context longword
;1435     1430  1 !
;1436     1431  1 ! IMPLICIT OUTPUTS:
;1437     1432  1 !       none
;1438     1433  1 !
;1439     1434  1 ! ROUTINE VALUE:
;1440     1435  1 !       SS$_NORMAL - if the requested action completed successfully
;1441     1436  1 !       SS$_NOPRIV - if the requestor did not have privileges for the
;1442     1437  1 !                    requested action
;1443     1438  1 !
;1444     1439  1 ! SIDE EFFECTS:
;1445     1440  1 !       The context longword is modified as necessary based upon the
;1446     1441  1 !       action requested.
;1447     1442  1 !
;1448     1443  1 !--
;1449     1444  1
;1450     1445  2 BEGIN
;1451     1446  2
```

```
;1452    1447  2 MAP
;1453    1448  2         CHANNEL         : WORD,
;1454    1449  2         OBJECT_NAME     : REF $BBLOCK,
;1455    1450  2         ITEM_LIST       : REF BLOCKVECTOR [, ITM$S_ITEM, BYTE];
;1456    1451  2
;1457    1452  2 LOCAL
;1458    1453  2         STATUS,                                 ! Local routine return status
;1459    1454  2         STATUS2,                                ! Temp status, may overwrite STATUS
;1460    1455  2         PSL             : $BBLOCK [4],          ! Local copy of PSL
;1461    1456  2         LOCAL_OBJTYP,                           ! Local copy of object type code
;1462    1457  2         LOCAL_IOSB      : VECTOR [4, WORD],     ! Local copy of the I/O status block
;1463    1458  2         LOCAL_LOCKID,                           ! Local copy of the lock-id
;1464    1459  2         OBJECT_DESC     : VECTOR [2],           ! Descriptor of object name
;1465    1460  2         SHARE           : BYTE,                 ! Whether to allow sharing or not
;1466    1461  2         ITEM_COUNT,                             ! Number of items in the list
;1467    1462  2         ITEM_CODE,                              ! Code from item list entry
;1468    1463  2         ITEM_SIZE,                              ! Size from item list entry
;1469    1464  2         ITEM_ADDR,                              ! Buffer addr from item list entry
;1470    1465  2         LOCAL_CHANNEL   : WORD,                 ! Local copy of user's channel
;1471    1466  2         IO_CHANNEL      : WORD,                 ! Object's channel
;1472    1467  2         FILE_FAB        : $FAB_DECL,            ! Object file's FAB
;1473    1468  2         FILE_NAM        : $NAM_DECL,            ! Object file's NAM block
;1474    1469  2         FILE_EXP_NAME   : $BBLOCK [NAM$C_MAXRSS],       ! Expanded name storage
;1475    1470  2         FILE_RES_NAME   : $BBLOCK [NAM$C_MAXRSS],       ! Resultant name storage
;1476    1471  2         FILE_FIB_DESC   : $BBLOCK [DSC$C_S_BLN],        ! File FIB descriptor
;1477    1472  2         FILE_FIB        : $BBLOCK [FIB$C_LENGTH],       ! File FIB storage
;1478    1473  2         DVI_ATR_LIST    : BLOCKVECTOR [2, ITM$S_ITEM, BYTE],    ! $GETDVI item list
;1479    1474  2         ACP_ATR_PTR,                            ! Pointer into ACP attribute list
;1480    1475  2         ACP_ATR_LIST    : REF BLOCKVECTOR [, 8, BYTE],  ! ACP attribute list
;1481    1476  2         ACL_TO_ATR_TAB  : VECTOR [MAX_ACL_ATR + 1]      ! ATR$C to ACL$C xlate
;1482    1477  2                           INITIAL (0,
;1483    1478  2                                    ATR$C_ADDACLENT,
;1484    1479  2                                    ATR$C_DELACLENT,
;1485    1480  2                                    ATR$C_MODACLENT,
;1486    1481  2                                    ATR$C_FNDACLENT,
;1487    1482  2                                    ATR$C_FNDACETYP,
;1488    1483  2                                    ATR$C_DELETEACL,
;1489    1484  2                                    ATR$C_READACL,
;1490    1485  2                                    ATR$C_ACLLENGTH,
;1491    1486  2                                    ATR$C_READACE),
;1492    1487  2         FUNCTION_CODE,                          ! QIOW function code
;1493    1488  2                                                 ! Also, ACL dispatch code
;1494    1489  2         CMK_ARG_LIST    : VECTOR [5];           ! $CMKRNL arg list
;1495    1490  2
;1496    1491  2 ! See if an access mode parameter was given.
;1497    1492  2
;1498    1493  2 CHANGE_ACMODE = 0;
;1499    1494  2 IF .ACCESS_MODE NEQA 0
;1500    1495  2 THEN IF PROBER (%REF (0), %REF (4), .ACCESS_MODE)
;1501    1496  2     THEN CHANGE_ACMODE = ..ACCESS_MODE
;1502    1497  2     ELSE RETURN SS$_ACCVIO;
;1503    1498  2
;1504    1499  2 MOVPSL (PSL);
;1505    1500  2 CALL_ACMODE = .PSL[PSL$V_PRVMOD];
;1506    1501  2 CHANGE_ACMODE = MAXU (.CHANGE_ACMODE, .CALL_ACMODE);
;1507    1502  2
;1508    1503  2 ! Determine the validity of the access mode parameter.
```

```
;  1509          1504  2
;  1510          1505  2 IF .CHANGE_ACMODE GTRU PSL$C_USER THEN RETURN SS$_BADPARAM;
;  1511          1506  2
;  1512          1507  2 ! Get the supplied channel, if any, and verify it.
;  1513          1508  2
;  1514          1509  2 IO_CHANNEL = LOCAL_CHANNEL = .CHANNEL;
;  1515          1510  2 IF .IO_CHANNEL NEQ 0
;  1516          1511  2 THEN
;  1517          1512  3     BEGIN
;  1518          1513  3     STATUS = IOC$VERIFYCHAN (.IO_CHANNEL);
;  1519          1514  3     IF NOT .STATUS THEN RETURN .STATUS;
;  1520          1515  2     END;
;  1521          1516  2
;  1522          1517  2 ! Get the object type code.
;  1523          1518  2
;  1524          1519  2 IF .OBJECT_TYPE NEQA 0
;  1525          1520  3 THEN (IF PROBER (%REF (0), %REF (4), .OBJECT_TYPE)
;  1526          1521  3       THEN LOCAL_OBJTYP = ..OBJECT_TYPE
;  1527          1522  3       ELSE RETURN SS$_ACCVIO)
;  1528          1523  2 ELSE RETURN SS$_INSFARG;
;  1529          1524  2
;  1530          1525  2 ! Check the validity of the object type code.
;  1531          1526  2
;  1532          1527  2 IF .LOCAL_OBJTYP LSSU MIN_OBJECT_TYPE
;  1533          1528  2 OR .LOCAL_OBJTYP GTRU MAX_OBJECT_TYPE
;  1534          1529  2 THEN RETURN SS$_BADPARAM;
;  1535          1530  2
;  1536          1531  2 ! Probe the object name if supplied.
;  1537          1532  2
;  1538          1533  2 IF .OBJECT_NAME NEQA 0
;  1539          1534  2 THEN
;  1540          1535  3     BEGIN
;  1541          1536  3     IF NOT PROBER (%REF (0), %REF (DSC$C_S_BLN), .OBJECT_NAME)
;  1542          1537  3     THEN RETURN SS$_ACCVIO;
;  1543          1538  3     OBJECT_DESC[0] = .OBJECT_NAME[DSC$W_LENGTH];
;  1544          1539  3     OBJECT_DESC[1] = .OBJECT_NAME[DSC$A_POINTER];
;  1545          1540  3     IF NOT EXE$PROBER (0, .OBJECT_DESC[0], .OBJECT_DESC[1])
;  1546          1541  3     THEN RETURN SS$_ACCVIO;
;  1547          1542  3     END
;  1548          1543  2 ELSE
;  1549          1544  3     BEGIN
;  1550          1545  3     OBJECT_DESC[0] = 0;
;  1551          1546  3     OBJECT_DESC[1] = 0;
;  1552          1547  2     END;
;  1553          1548  2
;  1554          1549  2 ! Get any value supplied for the context parameter.
;  1555          1550  2
;  1556          1551  2 ACL_CONTEXT = 0;
;  1557          1552  2 IF .CONTEXT NEQA 0
;  1558          1553  2 THEN IF PROBEW (%REF (0), %REF (4), .CONTEXT)
;  1559          1554  2      THEN ACL_CONTEXT = ..CONTEXT
;  1560          1555  2      ELSE RETURN SS$_ACCVIO;
;  1561          1556  2
;  1562          1557  2 ! Count the number of items in the item list.
;  1563          1558  2
;  1564          1559  2 SHARE = 1;                                          ! Assume shared access
;  1565          1560  2 INCR J FROM 0
```

```
;  1566          1561  2 DO IF PROBER (%REF (0), %REF (ITM$S_ITEM), ITEM_LIST[.J, 0,0,0,0])
;  1567          1562  3    THEN (IF .ITEM_LIST[.J, ITM$W_BUFSIZ] EQL 0
;  1568          1563  3          THEN
;  1569          1564  4              BEGIN
;  1570          1565  4              ITEM_COUNT = .J;
;  1571          1566  4              EXIT_LOOP;
;  1572          1567  4              END
;  1573          1568  3          ELSE
;  1574          1569  4              BEGIN
;  1575          1570  4              IF .ITEM_LIST[.J, ITM$W_ITMCOD] EQL ACL$C_ADDACLENT
;  1576          1571  4              OR .ITEM_LIST[.J, ITM$W_ITMCOD] EQL ACL$C_DELACLENT
;  1577          1572  4              OR .ITEM_LIST[.J, ITM$W_ITMCOD] EQL ACL$C_MODACLENT
;  1578          1573  4              OR .ITEM_LIST[.J, ITM$W_ITMCOD] EQL ACL$C_DELETEACL
;  1579          1574  4              THEN SHARE = 0;
;  1580          1575  3              END)
;  1581          1576  2    ELSE RETURN SS$_ACCVIO;
;  1582          1577  2
;  1583          1578  2 ! Initialize all common (to both types of objects) storage.
;  1584          1579  2
;  1585          1580  2 CH$FILL (0, 2*ITM$S_ITEM, DVI_ATR_LIST);
;  1586          1581  2 CH$FILL (0, DSC$C_S_BLN, LOCK_RESNAM);
;  1587          1582  2 LOCAL_LOCKID = 0;
;  1588          1583  2
;  1589          1584  2 ! Set up the lock resource name prefix.
;  1590          1585  2
;  1591          1586  2 LOCK_RESNAM[DSC$W_LENGTH] = RSN_S_PREFIX;
;  1592          1587  2 LOCK_RESNAM[DSC$A_POINTER] = RESNAM_TEXT;
;  1593          1588  2 CH$COPY (.$BBLOCK [.LOCK_PREFIX[.LOCAL_OBJTYP], DSC$W_LENGTH],
;  1594          1589  2           .$BBLOCK [.LOCK_PREFIX[.LOCAL_OBJTYP], DSC$A_POINTER],
;  1595          1590  2           0,
;  1596          1591  2           RSN_S_PREFIX, RESNAM_TEXT);
;  1597          1592  2
;  1598          1593  2 ! If the call is from user mode, take out a lock to form the parent lock ID
;  1599          1594  2 ! for all ACL locks. This facilitates releasing them at image rundown.
;  1600          1595  2
;  1601          1596  2 IF .CALL_ACMODE EQL PSL$C_USER
;  1602          1597  2 THEN
;  1603          1598  2     IF .PARENT_ID EQL 0
;  1604          1599  2     THEN
;  1605          1600  3         BEGIN
;  1606          1601  3         STATUS = $CMKRNL (ROUTIN = GET_PARENT_LOCK);
;  1607          1602  3         IF NOT .STATUS THEN RETURN .STATUS;
;  1608          1603  2         END;
;  1609          1604  2
;  1610          1605  2 ! Do any initial setup for the object.  For files, this means opening the
;  1611          1606  2 ! specified file if it is not already open.  For devices, this means assigning
;  1612          1607  2 ! a channel is one is not already assigned.  For most other objects, nothing
;  1613          1608  2 ! special is needed.
;  1614          1609  2
;  1615          1610  2 CASE .LOCAL_OBJTYP FROM MIN_OBJECT_TYPE TO MAX_OBJECT_TYPE OF
;  1616          1611  2 SET
;  1617          1612  2     [ACL$C_FILE]:
;  1618          1613  3         BEGIN
;  1619          1614  3
;  1620          1615  3 ! Initialize storage.
;  1621          1616  3
;  1622          1617  3         CH$FILL (0, FIB$C_LENGTH, FILE_FIB);
```

```
;  1623          1618  3          CH$FILL (0, DSC$C_S_BLN, FILE_FIB_DESC);
;  1624          1619  3          FILE_FIB_DESC[DSC$W_LENGTH] = FIB$C_LENGTH;
;  1625          1620  3          FILE_FIB_DESC[DSC$A_POINTER] = FILE_FIB;
;  1626          1621  3          FILE_FIB[FIB$B_AGENT_MODE] = .CHANGE_ACMODE;
;  1627          1622  3
;  1628          1623  3  ! If the file is not accessed, do it now.
;  1629          1624  3
;  1630          1625  3          IF .IO_CHANNEL EQL 0
;  1631          1626  3          THEN
;  1632          1627  4              BEGIN
;  1633        P 1628  4              $FAB_INIT (FAB = FILE_FAB,
;  1634        P 1629  4                         FNS = .OBJECT_DESC[0],
;  1635        P 1630  4                         FNA = .OBJECT_DESC[1],
;  1636        P 1631  4                         FOP = UFO,
;  1637          1632  4                         NAM = FILE_NAM);
;  1638        P 1633  4              $NAM_INIT (NAM = FILE_NAM,
;  1639        P 1634  4                         ESA = FILE_EXP_NAME,
;  1640        P 1635  4                         ESS = NAM$C_MAXRSS,
;  1641        P 1636  4                         RSA = FILE_RES_NAME,
;  1642          1637  4                         RSS = NAM$C_MAXRSS);
;  1643          1638  4              IF .SHARE
;  1644          1639  4              THEN
;  1645          1640  5                  BEGIN
;  1646          1641  5                  FILE_FAB[FAB$B_SHR] = FAB$M_GET OR FAB$M_PUT OR FAB$M_UPI;
;  1647          1642  5                  FILE_FAB[FAB$B_FAC] = FAB$M_GET;
;  1648          1643  5                  END
;  1649          1644  4              ELSE
;  1650          1645  5                  BEGIN
;  1651          1646  5                  FILE_FAB[FAB$B_SHR] = FAB$M_NIL;
;  1652          1647  5                  FILE_FAB[FAB$B_FAC] = FAB$M_GET OR FAB$M_PUT;
;  1653          1648  4                  END;
;  1654          1649  4              FILE_FAB[FAB$V_FILE_MODE] = .CHANGE_ACMODE;
;  1655          1650  4
;  1656          1651  4              STATUS = $OPEN (FAB = FILE_FAB);
;  1657          1652  4              IO_CHANNEL = .FILE_FAB[FAB$L_STV];
;  1658          1653  4              END
;  1659          1654  3          ELSE STATUS = SS$_NORMAL;
;  1660          1655  3
;  1661          1656  3  ! Now that a channel has been assigned to the file, do a simple access to
;  1662          1657  3  ! fill the fib.  This is needed to get the file-id used to build the lock name.
;  1663          1658  3
;  1664          1659  3          IF .STATUS
;  1665          1660  3          THEN
;  1666          1661  4              BEGIN
;  1667        P 1662  4              STATUS = $QIOW (CHAN = .IO_CHANNEL,
;  1668        P 1663  4                              FUNC = IO$_ACCESS,
;  1669        P 1664  4                              IOSB = LOCAL_IOSB,
;  1670          1665  4                              P1 = FILE_FIB_DESC);
;  1671          1666  4              IF .STATUS THEN STATUS = .LOCAL_IOSB[0];
;  1672          1667  3              END;
;  1673          1668  2          END;
;  1674          1669  2
;  1675          1670  2      [ACL$C_DEVICE]:
;  1676          1671  3          BEGIN
;  1677          1672  3
;  1678          1673  3  ! If necessary assign a channel to the specified device.
;  1679          1674  3
```

```
;1680     1675  3          IF .IO_CHANNEL EQL 0
;1681     1676  3          THEN
;1682     1677  4              BEGIN
;1683     1678  4              IF .OBJECT_DESC[0] EQL 0
;1684     1679  4              THEN RETURN SS$_INSFARG;
;1685   P 1680  4              STATUS = $ASSIGN (DEVNAM = OBJECT_DESC,
;1686     1681  4                               CHAN = IO_CHANNEL);
;1687     1682  3              END;
;1688     1683  3
;1689     1684  3      ! Now that there is a channel to the device, locate the ACL queue head.
;1690     1685  3
;1691     1686  3          IF .STATUS
;1692     1687  3          THEN
;1693     1688  4              BEGIN
;1694     1689  4              CMK_ARG_LIST[0] = 1;                ! Number of args
;1695     1690  4              CMK_ARG_LIST[1] = .IO_CHANNEL;      ! Channel number
;1696   P 1691  4              STATUS = $CMKRNL (ROUTIN = GET_UCB_ACL,
;1697     1692  4                               ARGLST = CMK_ARG_LIST);
;1698     1693  3              END;
;1699     1694  2          END;
;1700     1695  2
;1701     1696  2      [ACL$C_JOBCTL_QUEUE]:
;1702     1697  3          BEGIN
;1703     1698  3          STATUS = SS$_BADPARAM;
;1704     1699  2          END;
;1705     1700  2
;1706     1701  2      [ACL$C_COMMON_EF_CLUSTER]:
;1707     1702  3          BEGIN
;1708     1703  3          IF .OBJECT_DESC[0] EQL 0
;1709     1704  3          THEN RETURN SS$_INSFARG;
;1710     1705  3          CMK_ARG_LIST[0] = 1;                ! Number of args
;1711     1706  3          CMK_ARG_LIST[1] = OBJECT_DESC;      ! Cluster name descr
;1712   P 1707  3          STATUS = $CMKRNL (ROUTIN = GET_CEB_ACL,
;1713     1708  3                            ARGLST = CMK_ARG_LIST);
;1714     1709  2          END;
;1715     1710  2
;1716     1711  2      [ACL$C_LOGICAL_NAME_TABLE]:
;1717     1712  3          BEGIN
;1718     1713  3          IF .OBJECT_DESC[0] EQL 0
;1719     1714  3          THEN RETURN SS$_INSFARG;
;1720     1715  3          CMK_ARG_LIST[0] = 1;                ! Number of args
;1721     1716  3          CMK_ARG_LIST[1] = OBJECT_DESC;      ! Logical name table descr
;1722   P 1717  3          STATUS = $CMKRNL (ROUTIN = GET_LNT_ACL,
;1723     1718  3                            ARGLST = CMK_ARG_LIST);
;1724     1719  2          END;
;1725     1720  2
;1726     1721  2      [ACL$C_PROCESS]:
;1727     1722  3          BEGIN
;1728     1723  3          IF .OBJECT_DESC[0] EQL 0
;1729     1724  3          THEN RETURN SS$_INSFARG;
;1730     1725  3          CMK_ARG_LIST[0] = 1;                ! Number of args
;1731     1726  3          CMK_ARG_LIST[1] = OBJECT_DESC;      ! Process name descr
;1732   P 1727  3          STATUS = $CMKRNL (ROUTIN = GET_PCB_ACL,
;1733     1728  3                            ARGLST = CMK_ARG_LIST);
;1734     1729  2          END;
;1735     1730  2
;1736     1731  2      [ACL$C_GLOBAL_SECTION]:
```

```
;  1737          1732  3          BEGIN
;  1738          1733  3          IF .OBJECT_DESC[0] EQL 0
;  1739          1734  3          THEN RETURN SS$_INSFARG;
;  1740          1735  3          CMK_ARG_LIST[0] = 1;                        ! Number of args
;  1741          1736  3          CMK_ARG_LIST[1] = OBJECT_DESC;              ! Section name descr
;  1742        P 1737  3          STATUS = $CMKRNL (ROUTIN = GET_GBL_ACL,
;  1743          1738  3                            ARGLST = CMK_ARG_LIST);
;  1744          1739  2          END;
;  1745          1740  2
;  1746          1741  2      [INRANGE, OUTRANGE]:        STATUS = SS$_BADPARAM;
;  1747          1742  2  TES;
;  1748          1743  2
;  1749          1744  2  ! If any error have occurred, leave now.
;  1750          1745  2
;  1751          1746  2  IF NOT .STATUS
;  1752          1747  2  THEN
;  1753          1748  3      BEGIN
;  1754          1749  3      IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;  1755          1750  3      RETURN .STATUS;
;  1756          1751  2      END;
;  1757          1752  2
;  1758          1753  2  ! Now that the device has been identified, and a channel assigned if needed,
;  1759          1754  2  ! form the remainder of the lock resource name.  Then do the appropriate lock
;  1760          1755  2  ! or unlock.
;  1761          1756  2
;  1762          1757  2  IF .LOCAL_OBJTYP EQL ACL$C_FILE OR .LOCAL_OBJTYP EQL ACL$C_DEVICE
;  1763          1758  2  THEN
;  1764          1759  3      BEGIN
;  1765          1760  3      LOCAL       TMP_LEN;
;  1766          1761  3
;  1767          1762  3  ! Build the remaining portion of the lock name.
;  1768          1763  3
;  1769          1764  3      DVI_ATR_LIST[0, ITM$W_ITMCOD] = DVI$_DEVLOCKNAM;
;  1770          1765  3      DVI_ATR_LIST[0, ITM$W_BUFSIZ] = 31 - RSN_S_PREFIX;
;  1771          1766  3      DVI_ATR_LIST[0, ITM$L_BUFADR] = RESNAM_TEXT[RSN_T_DEVNAM];
;  1772          1767  3      DVI_ATR_LIST[0, ITM$L_RETLEN] = TMP_LEN;
;  1773        P 1768  3      STATUS = $GETDVI (CHAN = .IO_CHANNEL,
;  1774        P 1769  3                        ITMLST = DVI_ATR_LIST,
;  1775          1770  3                        IOSB = LOCAL_IOSB);
;  1776          1771  3      IF .STATUS THEN STATUS = .LOCAL_IOSB[0];
;  1777          1772  3      IF NOT .STATUS
;  1778          1773  3      THEN
;  1779          1774  4          BEGIN
;  1780          1775  4          IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;  1781          1776  4          RETURN .STATUS;
;  1782          1777  3          END;
;  1783          1778  3
;  1784          1779  3      LOCK_RESNAM[DSC$W_LENGTH] = .LOCK_RESNAM[DSC$W_LENGTH] + .TMP_LEN;
;  1785          1780  3      IF .LOCAL_OBJTYP EQL ACL$C_FILE
;  1786          1781  3      THEN
;  1787          1782  4          BEGIN
;  1788          1783  4          RESNAM_TEXT[RSN_W_FID_NUM] = .FILE_FIB[FIB$W_FID_NUM];
;  1789          1784  4          RESNAM_TEXT[RSN_W_FID_SEQ] = .FILE_FIB[FIB$W_FID_SEQ];
;  1790          1785  4          LOCK_RESNAM[DSC$W_LENGTH] = .LOCK_RESNAM[DSC$W_LENGTH] + 4;
;  1791          1786  3          END;
;  1792          1787  2      END;
;  1793          1788  2
```

```
;  1794          1789  2 ! For files, process the attribute list, and pass it through to the ACP.
;  1795          1790  2 ! for all other objects, the attribute processing is done here.
;  1796          1791  2
;  1797          1792  2 IF .LOCAL_OBJTYP EQL ACL$C_FILE
;  1798          1793  2 THEN
;  1799          1794  3     BEGIN
;  1800          1795  3
;  1801          1796  3 ! Build the ACP attribute list.
;  1802          1797  3
;  1803          1798  3     STATUS = LIB$GET_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;  1804          1799  3     IF NOT .STATUS
;  1805          1800  3     THEN
;  1806          1801  4         BEGIN
;  1807          1802  4         IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;  1808          1803  4         RETURN .STATUS;
;  1809          1804  3         END;
;  1810          1805  3     FUNCTION_CODE = IO$_ACCESS;
;  1811          1806  3     ACP_ATR_PTR = 0;
;  1812          1807  3     INCR J FROM 0 TO .ITEM_COUNT - 1
;  1813          1808  3     DO
;  1814          1809  4         BEGIN
;  1815          1810  4         IF PROBER (%REF (0), %REF (ITM$S_ITEM), ITEM_LIST[.J, 0,0,0,0])
;  1816          1811  4         THEN
;  1817          1812  5             BEGIN
;  1818          1813  5             ITEM_CODE = .ITEM_LIST[.J, ITM$W_ITMCOD];
;  1819          1814  5             ITEM_SIZE = .ITEM_LIST[.J, ITM$W_BUFSIZ];
;  1820          1815  5             ITEM_ADDR = .ITEM_LIST[.J, ITM$L_BUFADR];
;  1821          1816  5             END
;  1822          1817  4         ELSE
;  1823          1818  5             BEGIN
;  1824          1819  5             STATUS = SS$_ACCVIO;
;  1825          1820  5             LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;  1826          1821  5             IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;  1827          1822  5             RETURN .STATUS;
;  1828          1823  4             END;
;  1829          1824  4         IF .ITEM_CODE GTR MAX_ACL_ATR
;  1830          1825  4         THEN
;  1831          1826  5             BEGIN
;  1832          1827  5             STATUS = SS$_BADPARAM;
;  1833          1828  5             LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;  1834          1829  5             IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;  1835          1830  5             RETURN .STATUS;
;  1836          1831  4             END;
;  1837          1832  4
;  1838          1833  4         IF .ITEM_CODE EQL ACL$C_RLOCK_ACL
;  1839          1834  4         OR .ITEM_CODE EQL ACL$C_WLOCK_ACL
;  1840          1835  4         THEN
;  1841          1836  5             BEGIN
;  1842          1837  5             IF .ITEM_SIZE LSSU 4
;  1843          1838  5             THEN
;  1844          1839  6                 BEGIN
;  1845          1840  6                 STATUS = SS$_BADPARAM;
;  1846          1841  6                 LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;  1847          1842  6                 IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;  1848          1843  6                 RETURN .STATUS;
;  1849          1844  5                 END;
;  1850          1845  5             IF NOT EXE$PROBEW (0, .ITEM_SIZE, .ITEM_ADDR)
```

```
;1851          1846  5              THEN
;1852          1847  6                  BEGIN
;1853          1848  6                  STATUS = SS$_ACCVIO;
;1854          1849  6                  LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;1855          1850  6                  IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;1856          1851  6                  RETURN .STATUS;
;1857          1852  5                  END;
;1858        P 1853  5              STATUS = $ENQ (LKMODE = (IF .ITEM_CODE EQL ACL$C_RLOCK_ACL
;1859        P 1854  5                                       THEN LCK$K_CRMODE ELSE LCK$K_PWMODE),
;1860        P 1855  5                                 LKSB = LOCAL_IOSB,
;1861        P 1856  5                                 RESNAM = LOCK_RESNAM,
;1862        P 1857  5                                 PARID = (IF .CALL_ACMODE EQL PSL$C_USER
;1863        P 1858  5                                          THEN .PARENT_ID
;1864        P 1859  5                                          ELSE 0),
;1865        P 1860  5                                 FLAGS = LCK$M_NOQUEUE OR
;1866        P 1861  5                                         LCK$M_SYNCSTS OR
;1867        P 1862  5                                         LCK$M_SYSTEM,
;1868          1863  5                                 ACMODE = PSL$C_USER);
;1869          1864  5              IF .STATUS THEN STATUS = .LOCAL_IOSB[0];
;1870          1865  5              IF NOT .STATUS
;1871          1866  5              THEN
;1872          1867  6                  BEGIN
;1873          1868  6                  LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;1874          1869  6                  IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;1875          1870  6                  RETURN .STATUS;
;1876          1871  5                  END;
;1877          1872  5              CH$COPY (4, LOCAL_IOSB[2],
;1878          1873  5                       0,
;1879          1874  5                       .ITEM_SIZE,  .ITEM_ADDR);  ! Copy lock-id
;1880          1875  5              END
;1881          1876  5
;1882          1877  4          ELSE IF .ITEM_CODE EQL ACL$C_UNLOCK_ACL
;1883          1878  4          THEN
;1884          1879  5              BEGIN
;1885          1880  5              IF .ITEM_SIZE LSSU 4
;1886          1881  5              THEN
;1887          1882  6                  BEGIN
;1888          1883  6                  STATUS = SS$_BADPARAM;
;1889          1884  6                  LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;1890          1885  6                  IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;1891          1886  6                  RETURN .STATUS;
;1892          1887  5                  END;
;1893          1888  5              IF NOT EXE$PROBER (0, .ITEM_SIZE, .ITEM_ADDR)
;1894          1889  5              THEN
;1895          1890  6                  BEGIN
;1896          1891  6                  STATUS = SS$_ACCVIO;
;1897          1892  6                  LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;1898          1893  6                  IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;1899          1894  6                  RETURN .STATUS;
;1900          1895  5                  END;
;1901          1896  5              CH$COPY (.ITEM_SIZE, .ITEM_ADDR, 0, 4, LOCAL_LOCKID);
;1902          1897  5              END
;1903          1898  4          ELSE
;1904          1899  5              BEGIN
;1905          1900  5
;1906          1901  5 ! Save the converted attribute code and other information.
;1907          1902  5
```

```
;1908        1903  5              ACP_ATR_LIST[.ACP_ATR_PTR, ATR$W_TYPE] = .ACL_TO_ATR_TAB[.ITEM_CODE];
;1909        1904  5              IF .ITEM_CODE EQL ACL$C_ADDACLENT OR .ITEM_CODE EQL ACL$C_DELACLENT
;1910        1905  5              OR .ITEM_CODE EQL ACL$C_MODACLENT OR .ITEM_CODE EQL ACL$C_DELETEACL
;1911        1906  5              THEN FUNCTION_CODE = IO$_MODIFY;
;1912        1907  5              ACP_ATR_LIST[.ACP_ATR_PTR, ATR$W_SIZE] = .ITEM_SIZE;
;1913        1908  5              ACP_ATR_LIST[.ACP_ATR_PTR, ATR$L_ADDR] = .ITEM_ADDR;
;1914        1909  5              ACP_ATR_PTR = .ACP_ATR_PTR + 1;
;1915        1910  4              END;
;1916        1911  3          END;
;1917        1912  3
;1918        1913  3  ! Tie off the attribute descriptor list.
;1919        1914  3
;1920        1915  3      ACP_ATR_LIST[.ACP_ATR_PTR, ATR$W_TYPE] = 0;
;1921        1916  3      ACP_ATR_LIST[.ACP_ATR_PTR, ATR$W_SIZE] = 0;
;1922        1917  3
;1923        1918  3  ! Initialize the FIB, and call the ACP to process the attribute list.
;1924        1919  3
;1925        1920  3      FILE_FIB[FIB$L_ACLCTX] = .ACL_CONTEXT;
;1926      P 1921  3      STATUS = $QIOW (CHAN = .IO_CHANNEL,
;1927      P 1922  3                      FUNC = .FUNCTION_CODE,
;1928      P 1923  3                      IOSB = LOCAL_IOSB,
;1929      P 1924  3                      P1 = FILE_FIB_DESC,
;1930        1925  3                      P5 = .ACP_ATR_LIST);
;1931        1926  3      IF .STATUS THEN STATUS = .LOCAL_IOSB[0];
;1932        1927  3      IF .STATUS THEN STATUS = .FILE_FIB[FIB$L_ACL_STATUS];
;1933        1928  3      IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;1934        1929  3
;1935        1930  3      STATUS2 = LIB$FREE_VM (%REF ((.ITEM_COUNT + 1) * 8), ACP_ATR_LIST);
;1936        1931  3      IF .STATUS AND NOT .STATUS2 THEN STATUS = .STATUS2;
;1937        1932  3
;1938        1933  3  ! If an unlock request was made on the file's ACL, do it now.
;1939        1934  3
;1940        1935  3      IF .LOCAL_LOCKID NEQ 0 THEN STATUS = $DEQ (LKID = .LOCAL_LOCKID);
;1941        1936  3      END
;1942        1937  3
;1943        1938  3  ! For non-file objects, the queue head has been located; loop through
;1944        1939  3  ! the item list performing the actions specified.
;1945        1940  3
;1946        1941  2  ELSE
;1947        1942  3      BEGIN
;1948        1943  3      CMK_ARG_LIST[0] = 3;
;1949        1944  3      CMK_ARG_LIST[1] = .ITEM_COUNT;
;1950        1945  3      CMK_ARG_LIST[2] = .ITEM_LIST;
;1951        1946  3      CMK_ARG_LIST[3] = .SHARE;
;1952      P 1947  3      STATUS = $CMKRNL (ROUTIN = ACL_DISPATCH,
;1953        1948  3                        ARGLST = CMK_ARG_LIST);
;1954        1949  2      END;
;1955        1950  2
;1956        1951  2  ! If necessary, deassign the channel assigned.
;1957        1952  2
;1958        1953  2  IF .LOCAL_CHANNEL EQL 0 THEN $DASSGN (CHAN = .IO_CHANNEL);
;1959        1954  2
;1960        1955  2  ! If necessary, return the context.
;1961        1956  2
;1962        1957  2  IF .CONTEXT NEQA 0
;1963        1958  2  THEN IF PROBEW (%REF (0), %REF (4), .CONTEXT)
;1964        1959  2       THEN
```

```
;  1965          1960  3          BEGIN
;  1966          1961  3          IF .LOCAL_OBJTYP EQL ACL$C_FILE
;  1967          1962  3          THEN .CONTEXT = .FILE_FIB[FIB$L_ACLCTX]
;  1968          1963  3          ELSE .CONTEXT = .ACL_CONTEXT;
;  1969          1964  3          END;
;  1970          1965  2      ELSE STATUS = SS$_ACCVIO;
;  1971          1966  2
;  1972          1967  2 RETURN .STATUS;
;  1973          1968  2
;  1974          1969  1 END;                                    ! End of routine SYS$CHANGE_ACL
;  INFO#250              L1:1779
;  Referenced LOCAL symbol TMP_LEN is probably not initialized


                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

00000023  00000022  00000021  00000020  0000001F  00000000  0054C P.AFL:  .LONG   0, 31, 32, 33, 34, 35, 36, 37, 38, 39          ;
                    00000027  00000026  00000025  00000024  00564

                                                                .EXTRN  SYS$CMKRNL, SYS$OPEN
                                                                .EXTRN  SYS$QIOW, SYS$ASSIGN
                                                                .EXTRN  SYS$DASSGN, SYS$GETDVI
                                                                .EXTRN  SYS$ENQ, SYS$DEQ

                                                                .PSECT  $CODE$,NOWRT,2

                                                  0FFC 00000    .ENTRY  SYS$CHANGE_ACL, Save R2,R3,R4,R5,R6,R7,R8,-  ; 1391
                                                                        R9,R10,R11
                                        5E     FC68   CE  9E 00002    MOVAB   -920(SP), SP
          34              00 00000000'  EF            28  2C 00007    MOVC5   #40, P.AFL, #0, #52, ACL_TO_ATR_TAB          ; 1486
                                                 44   AE       00010
                                    00000000'   EF    D4 00012    CLRL    CHANGE_ACMODE                                    ; 1493
                                50          14   AC   D0 00018    MOVL    ACCESS_MODE, R0                                  ; 1494
                                                      50   D5 0001C    TSTL    R0
                                                      0D   13 0001E    BEQL    1$
                        60                    04      00   CC 00020    PROBER  #0, #4, (R0)                                 ; 1495
                                                      6A   13 00024    BEQL    5$
                            00000000'   EF            60   D0 00026    MOVL    (R0), CHANGE_ACMODE                          ; 1496
                                                      50   DC 0002D 1$: MOVPSL  PSL                                          ; 1499
00000000'   EF              50                  02      16   EF 0002F    EXTZV   #22, #2, PSL, CALL_ACMODE                    ; 1500
                                50 00000000'    EF        D0 00038    MOVL    CHANGE_ACMODE, R0                            ; 1501
                            00000000'   EF            50   D1 0003F    CMPL    R0, CALL_ACMODE
                                                      07   1E 00046    BGEQU   2$
                                50 00000000'    EF        D0 00048    MOVL    CALL_ACMODE, R0
                            00000000'   EF            50   D0 0004F 2$: MOVL    R0, CHANGE_ACMODE
                                03 00000000'    EF        D1 00056    CMPL    CHANGE_ACMODE, #3                            ; 1505
                                                      3D   1A 0005D    BGTRU   6$
                                50          04   AC   3C 0005F    MOVZWL  CHANNEL, R0                                  ; 1509
                            10  AE                50   B0 00063    MOVW    R0, LOCAL_CHANNEL
                            20  AE                50   B0 00067    MOVW    R0, IO_CHANNEL
                                58          20   AE   3C 0006B    MOVZWL  IO_CHANNEL, R8                               ; 1510
                                                      12   13 0006F    BEQL    3$
                                50                    58   D0 00071    MOVL    R8, R0                                       ; 1513
                                    00000000G       00   16 00074    JSB     IOC$VERIFYCHAN
                                5B                    50   D0 0007A    MOVL    R0, STATUS
                                03                    5B   E8 0007D    BLBS    STATUS, 3$                                   ; 1514
```

```
                                          059B  31 00080          BRW     81$                                     ;
                          50        08    AC  D0 00083 3$:       MOVL    OBJECT_TYPE, R0                         ; 1519
                                          03  12 00087          BNEQ    4$                                      ;
                                        0293  31 00089          BRW     36$                                     ;
                  60      04              00  0C 0008C 4$:       PROBER  #0, #4, (R0)                            ; 1520
                                          6D  13 00090 5$:       BEQL    12$                                     ;
                          56              60  D0 00092          MOVL    (R0), LOCAL_OBJTYP                      ; 1521
                                          05  13 00095          BEQL    6$                                      ; 1527
                          07              56  D1 00097          CMPL    LOCAL_OBJTYP, #7                        ; 1528
                                          04  1B 0009A          BLEQU   7$                                      ;
                          50              14  D0 0009C 6$:       MOVL    #20, R0                                 ; 1529
                                              04 0009F          RET                                             ;
                          50        0C    AC  D0 000A0 7$:       MOVL    OBJECT_NAME, R0                         ; 1533
                                          24  13 000A4          BEQL    8$                                      ;
                  60      08              00  0C 000A6          PROBER  #0, #8, (R0)                            ; 1536
                                          53  13 000AA          BEQL    12$                                     ;
                      F0  AD              60  3C 000AC          MOVZWL  (R0), OBJECT_DESC                       ; 1538
                      F4  AD        04    A0  D0 000B0          MOVL    4(R0), OBJECT_DESC+4                    ; 1539
                          50        F4    AD  D0 000B5          MOVL    OBJECT_DESC+4, R0                       ; 1540
                          51        F0    AD  D0 000B9          MOVL    OBJECT_DESC, R1                         ;
                                          53  D4 000BD          CLRL    R3                                      ;
                              00000000G   00  16 000BF          JSB     EXE$PROBER                              ;
                          05              50  E8 000C5          BLBS    R0, 9$                                  ;
                                          62  11 000C8          BRB     15$                                     ; 1541
                                  F0      AD  7C 000CA 8$:       CLRQ    OBJECT_DESC                             ; 1545
                              00000000'   EF  D4 000CD 9$:       CLRL    ACL_CONTEXT                             ; 1551
                                    1C    AE  D4 000D3          CLRL    28(SP)                                  ; 1552
                                    1C    AC  D5 000D6          TSTL    CONTEXT                                 ;
                                          12  13 000D9          BEQL    10$                                     ;
                                    1C    AE  D6 000DB          INCL    28(SP)                                  ;
                1C    BC                  04  00 0D 000DE          PROBEW  #0, #4, @CONTEXT                        ; 1553
                                          47  13 000E3          BEQL    15$                                     ;
                          00000000'   EF        1C  BC  D0 000E5  MOVL    @CONTEXT, ACL_CONTEXT                   ; 1554
                          5A              01  90 000ED 10$:      MOVB    #1, SHARE                               ; 1559
                          59        10    AC  D0 000F0          MOVL    ITEM_LIST, R9                           ; 1561
                                          50  D4 000F4          CLRL    J                                       ;
                      51                  0C  C5 000F6 11$:      MULL3   #12, J, R1                              ;
                    6149                  00  0C 000FA          PROBER  #0, #12, (R1)[R9]                       ;
                                          2B  13 000FF 12$:      BEQL    15$                                     ;
                                      6149  9F 00101          PUSHAB  (R1)[R9]                                ; 1562
                                        9E  B5 00104          TSTW    @(SP)+                                  ;
                                        05  12 00106          BNEQ    13$                                     ;
                          57              50  D0 00108          MOVL    J, ITEM_COUNT                           ; 1565
                                          2B  11 0010B          BRB     17$                                     ; 1564
                                  02  A149  9F 00110D 13$:      PUSHAB  2(R1)[R9]                               ; 1570
                          51              9E  3C 00111          MOVZWL  @(SP)+, R1                              ;
                          01              51  B1 00114          CMPW    R1, #1                                  ;
                                          0F  13 00117          BEQL    14$                                     ;
                          02              51  B1 00119          CMPW    R1, #2                                  ; 1571
                                          0A  13 0011C          BEQL    14$                                     ;
                          03              51  B1 0011E          CMPW    R1, #3                                  ; 1572
                                          05  13 00121          BEQL    14$                                     ;
                          06              51  B1 00123          CMPW    R1, #6                                  ; 1573
                                          08  12 00126          BNEQ    16$                                     ;
                                          5A  94 00128 14$:      CLRB    SHARE                                   ; 1574
                                          04  11 0012A          BRB     16$                                     ; 1562
                          50              0C  D0 0012C 15$:      MOVL    #12, R0                                 ; 1576
```

```
                                                  04 0012F                RET
                    BE          50 7FFFFFFF    8F  F3 00130 16$:     AOBLEQ  #2147483647, J, 11$                          ; 1561
              18    00          6E             00  2C 00138 17$:     MOVC5   #0, (SP), #0, #24, DVI_ATR_LIST              ; 1580
                                        78       AE     0C130
              08    00          6E             00  2C 0013F          MOVC5   #0, (SP), #0, #8, LOCK_RESNAM                ; 1581
                                00000000'      EF     00144
                                        28       AE  D4 00149          CLRL    LOCAL_LOCKID                                ; 1582
                          00000000'  EF          08  B0 0014C          MOVW    #8, LOCK_RESNAM                             ; 1586
                          00000000'  EF 00000000'  EF  9E 00153          MOVAB   RESNAM_TEXT, LOCK_RESNAM+4                  ; 1587
                                50 00000000'EF46  D0 0015E          MOVL    LOCK_PREFIX[LOCAL_OBJTYP], R0               ; 1588
              C8    00    04    B0             60  2C 00166          MOVC5   (R0), @4(R0), #0, #8, RESNAM_TEXT
                                00000000'      EF     0016C
                                03 00000000'   EF  D1 00171          CMPL    CALL_ACMODE, #3                             ; 1596
                                               20  12 00178          BNEQ    18$
                                   00000000'   EF  D5 0017A          TSTL    PARENT_ID                                   ; 1598
                                               18  12 00180          BNEQ    18$
                                               7E  D4 00182          CLRL    -(SP)                                       ; 1601
                                00000000V      EF  9F 00184          PUSHAB  GET_PARENT_LOCK
                          00000000G  00        02  FB 00188          CALLS   #2, SYS$CMRRNL
                                50             50  D0 00191          MOVL    R0, STATUS
                                03             5B  E8 00194          BLBS    STATUS, 18$                                 ; 1602
                                          0484 31  00197          BRW     81$
                    06          01             56  CF 0019A 18$:     CASEL   LOCAL_OBJTYP, #1, #6                        ; 1610
        0131    012C        00F7          0011     0019E 19$:     .WORD   20$-19$,-
                017C        0163          014A     001A6                  26$-19$,-
                                                                          29$-19$,-
                                                                          31$-19$,-
                                                                          32$-19$,-
                                                                          33$-19$,-
                                                                          35$-19$
                                          011B  31  001AC          BRW     29$                                         ; 1741
    0040  8F   00          6E                 00  2C 001AF 20$:     MOVC5   #0, (SP), #0, #64, FILE_FIB                 ; 1617
                                        0090     CE     001B6
              08    00          6E             00  2C 001B9          MOVC5   #0, (SP), #0, #8, FILE_FIB_DESC             ; 1618
                                        00D0     CE     001BE
                                00D0    CE       40  8F  9B 001C1          MOVZBW  #64, FILE_FIB_DESC                          ; 1619
                                00D4    CE     0090  CE  9E 001C7          MOVAB   FILE_FIB, FILE_FIB_DESC+4                   ; 1620
                                00BE    CE 00000000'  EF  90 001CE          MOVB    CHANGE_ACMODE, FILE_FIB+46                  ; 1621
                                                      58  D5 001D7          TSTL    R8                                          ; 1625
                                                      03  13 001D9          BEQL    21$
                                                0087  31  001DB          BRW     24$
    0050  8F   00          6E                 00  2C 001DE 21$:     MOVC5   #0, (SP), #0, #80, $RMS_PTR                 ; 1632
                                          A0     AD     001E5
                                A0      AD   5003  8F  B0 001E7          MOVW    #20483, $RMS_PTR
                                A4      AD 00020000  8F  D0 001ED          MOVL    #131072, $RMS_PTR+4
                                B6      AD           02  90 001F5          MOVB    #2, $RMS_PTR+22
                                BF      AD           02  90 001F9          MOVB    #2, $RMS_PTR+31
                                C8      AD     FF40  CD  9E 001FD          MOVAB   FILE_NAM, $RMS_PTR+40
                                CC      AD       F4  AD  D0 00203          MOVL    OBJECT_DESC+4, $RMS_PTR+44
                                D4      AD       F0  AD  90 00208          MOVB    OBJECT_DESC, $RMS_PTR+52
    0060  8F   00          6E                 00  2C 0020D          MOVC5   #0, (SP), #0, #96, $RMS_PTR                 ; 1637
                                          FF40  CD     00214
                                FF40    CD   6002  8F  B0 00217          MOVW    #24578, $RMS_PTR
                                FF42    CD         01  8E 0021E          MNEGB   #1, $RMS_PTR+2
                                FF44    CD     00D8  CE  9E 00223          MOVAB   FILE_RES_NAME, $RMS_PTR+4
                                FF4A    CD         01  8E 0022A          MNEGB   #1, $RMS_PTR+10
                                FF4C    CD     FE40  CD  9E 0022F          MOVAB   FILE_EXP_NAME, $RMS_PTR+12
```

```
                                08              5A   E9 00236          BLBC    SHARE, 22$                                  ; 1638
                             B6 AD        4302  8F   B0 00239          MOVW    #17154, FILE_FAB+22                         ; 1642
                                                06   11 0023F          BRB     23$                                         ; 1638
                             B6 AD        2003  8F   B0 00241 22$:     MOVW    #8195, FILE_FAB+22                          ; 1647
   EA   AD           02       04 00000000'     EF   F0 00247 23$:     INSV    CHANGE_ACMODE, #4, #2, FILE_FAB+74          ; 1649
                                A0              AD   9F 00251          PUSHAB  FILE_FAB                                    ; 1651
                 00000000G   00                 01   FB 00254          CALLS   #1, SYS$OPEN
                             5B                 50   D0 0025B          MOVL    R0, STATUS
                          20 AE        AC       AD   B0 0025E          MOVW    FILE_FAB+12, IO_CHANNEL                     ; 1652
                                                03   11 00263          BRB     25$                                         ; 1625
                             5B                 01   D0 00265 24$:     MOVL    #1, STATUS                                  ; 1654
                             45                 5B   E9 00268 25$:     BLBC    STATUS, 27$                                 ; 1659
                                                7E   7C 0026B          CLRQ    -(SP)                                       ; 1665
                                                7E   7C 0026D          CLRQ    -(SP)
                                                7E   D4 0026F          CLRL    -(SP)
                                      00E4      CE   9F 00271          PUSHAB  FILE_FIB_DESC
                                                7E   7C 00275          CLRQ    -(SP)
                                         F8     AD   9F 00277          PUSHAB  LOCAL_IOSB
                                                32   DD 0027A          PUSHL   #50
                             7E          48     AE   3C 0027C          MOVZWL  IO_CHANNEL, -(SP)
                                                7E   D4 00280          CLRL    -(SP)
                 00000000G   00                 0C   FB 00282          CALLS   #12, SYS$QIOW
                             5B                 50   D0 00289          MOVL    R0, STATUS
                             21                 5B   E9 0028C          BLBC    STATUS, 27$                                 ; 1666
                             5B          F8     AD   3C 0028F          MOVZWL  LOCAL_IOSB, STATUS
                                                38   11 00293          BRB     30$                                         ; 1610
                                                58   D5 00295 26$:     TSTL    R8                                          ; 1675
                                                17   12 00297          BNEQ    27$
                                         F0     AD   D5 00299          TSTL    OBJECT_DESC                                 ; 1678
                                                66   13 0029C          BEQL    34$
                                                7E   7C 0029E          CLRQ    -(SP)                                       ; 1681
                                             28 AE   9F 002A0          PUSHAB  IO_CHANNEL
                                             F0 AD   9F 002A3          PUSHAB  OBJECT_DESC
   00000000G   00                                04   FB 002A6          CALLS   #4, SYS$ASSIGN
               5B                                50   D0 002AD          MOVL    R0, STATUS
               03                                5B   E8 002B0 27$:     BLBS    STATUS, 28$                                 ; 1686
                                              01F9 31   002B3          BRW     60$
            30 AE                                01   D0 002B6 28$:     MOVL    #1, CMK_ARG_LIST                            ; 1689
            34 AE                20 AE   3C 002BA          MOVZWL  IO_CHANNEL, CMK_ARG_LIST+4                          ; 1690
                                 30 AE   9F 002BF          PUSHAB  CMK_ARG_LIST                                        ; 1692
                          00000000V      EF   9F 002C2          PUSHAB  GET_UCB_ACL
                                                6D   11 002C8          BRB     38$
                             5B                 14   D0 002CA 29$:     MOVL    #20, STATUS                                 ; 1698
                                                72   11 002CD 30$:     BRB     39$                                         ; 1610
                                             F0 AD   D5 002CF 31$:     TSTL    OBJECT_DESC                                 ; 1703
                                                4B   13 002D2          BEQL    36$
            30 AE                                01   D0 002D4          MOVL    #1, CMK_ARG_LIST                            ; 1705
            34 AE                F0 AD   9E 002D8          MOVAB   OBJECT_DESC, CMK_ARG_LIST+4                         ; 1706
                                 30 AE   9F 002DD          PUSHAB  CMK_ARG_LIST                                        ; 1708
                          00000000V      EF   9F 002E0          PUSHAB  GET_CEB_ACL
                                                4F   11 002E6          BRB     38$
                                             F0 AD   D5 002E8 32$:     TSTL    OBJECT_DESC                                 ; 1713
                                                32   13 002EB          BEQL    36$
            30 AE                                01   D0 002ED          MOVL    #1, CMK_ARG_LIST                            ; 1715
            34 AE                F0 AD   9E 002F1          MOVAB   OBJECT_DESC, CMK_ARG_LIST+4                         ; 1716
                                 30 AE   9F 002F6          PUSHAB  CMK_ARG_LIST                                        ; 1718
                          00000000V      EF   9F 002F9          PUSHAB  GET_LNT_ACL                                         ;
```

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                                        36  11 002FF                BRB     38$
                                    F0  AD  D  00301 33$:           TSTL    OBJECT_DESC                                     ; 1723
                                        19  15 00304 34$:           BEQL    36$
                                30  AE        01  D0 00306         MOVL    #1, CMK_ARG_LIST                                ; 1725
                                34  AE    F0  AD  9E 0030A         MOVAB   OBJECT_DESC, CMK_ARG_LIST+4                     ; 1726
                                        30  AE  9F 0030F         PUSHAB  CMK_ARG_LIST                                    ; 1728
                                00000000V   EF  9F 00312         PUSHAB  GET_PCB_ACL
                                        1D  11 00318             BRB     38$
                                    F0  AD  D5 0031A 35$:        TSTL    OBJECT_DESC                                     ; 1733
                                        06  12 0031D             BNEQ    37$
                                50  0114   8F  3C 0031F 36$:     MOVZWL  #276, R0                                        ; 1734
                                        04  00324                RET
                                30  AE        01  D0 00325 37$:     MOVL    #1, CMK_ARG_LIST                                ; 1735
                                34  AE    F0  AD  9E 00329         MOVAB   OBJECT_DESC, CMK_ARG_LIST+4                     ; 1736
                                        30  AE  9F 0032E         PUSHAB  CMK_ARG_LIST                                    ; 1738
                                00000000V   EF  9F 00331         PUSHAB  GET_GBL_ACL
                    00000000G   00          02  FB 00337 38$:     CALLS   #2, SYS$CMKRNL
                                50          50  D0 0033E         MOVL    R0, STATUS
                                4C          5B  E9 00341 39$:     BLBC    STATUS, 42$                                     ; 1746
                                    18  AE  D4  00344             CLRL    24(SP)                                          ; 1757
                                01          56  D1 00347         CMPL    LOCAL_OBJTYP, #1
                                            05  12 0034A         BNEQ    40$
                                    18  AE  D6  0034C             INCL    24(SP)
                                            05  11 0034F         BRB     41$
                                02          56  D1 00351 40$:     CMPL    LOCAL_OBJTYP, #2
                                            59  12 00354         BNEQ    43$
                                78  AE 00F00017 8F  D0 00356 41$:     MOVL    #15728663, DVI_ATR_LIST                         ; 1765
                                7C  AE 00000000' EF  9E 0035E         MOVAB   RESNAM_TEXT+8, DVI_ATR_LIST+4                   ; 1766
                            0080    CE      24  AE  9E 00366         MOVAB   TMP_LEN, DVI_ATR_LIST+8                         ; 1767
                                            7E  7C 0036C             CLRQ    -(SP)                                           ; 1770
                                            7E  D4 0036E             CLRL    -(SP)
                                        F8  AD  9F 00370         PUSHAB  LOCAL_IOSB
                                    0088    CE  9F 00373         PUSHAB  DVI_ATR_LIST
                                            7E  D4 00377         CLRL    -(SP)
                                7E          38  AE  3C 00379         MOVZWL  IO_CHANNEL, -(SP)
                                            7E  D4 0037D         CLRL    -(SP)
                    00000000G   00              08  FB 0037F         CALLS   #8, SYS$GETDVI
                                5B              50  D0 00386         MOVL    R0, STATUS
                                48              5B  E9 00389         BLBC    STATUS, 45$                                     ; 1771
                                5B          F8  AD  3C 0038C         MOVZWL  LOCAL_IOSB, STATUS
                                41              5B  E9 00390 42$:     BLBC    STATUS, 45$                                     ; 1772
                    00000000'   EF      24  AE  A0 00393         ADDW2   TMP_LEN, LOCK_RESNAM                            ; 1779
                                10      18  AE  E9 0039B         BLBC    24(SP), 43$                                     ; 1780
                    00000000'   EF  0094    CE  D0 0039F         MOVL    FILE_FIB+4, RESNAM_TEXT+24                      ; 1783
                    00000000'   EF          04  A0 003A8         ADDW2   #4, LOCK_RESNAM                                 ; 1785
                                03      18  AE  E8 003AF 43$:     BLBS    24(SP), 44$                                     ; 1798
                                        0211  31 003B3             BRW     75$
                                    2C  AE  9F 003B6 44$:         PUSHAB  ACP_ATR_LIST
                08  AE                 57      03  78 003B9         ASHL    #3, ITEM_COUNT, 8(SP)
                            08  AE              08  C0 003BE         ADDL2   #8, 8(SP)
                            18  AE          08  AE  D0 003C2         MOVL    8(SP), 24(SP)
                                        18  AE  9F 003C7         PUSHAB  24(SP)
                    00000000G   00              02  FB 003CA         CALLS   #2, LIB$GET_VM
                                5B              50  D0 003D1         MOVL    R0, STATUS
                                03              5B  E8 003D4 45$:     BLBS    STATUS, 46$                                     ; 1799
                                        00D5  31 003D7             BRW     60$
                            14  AE              32  D0 003DA 46$:     MOVL    #50, FUNCTION_CODE                              ; 1805
```

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                                                58  D4 003DE            CLRL    ACP_ATR_PTR                                     ; 1806
                                             56 01  CE 003E0            MNEGL   #1, J                                           ; 1807
                                          014D  31  003E3            BRW     69$
                                           50 56 0C  C5 003E6 47$:    MULL3   #12, J, R0                                      ; 1810
                                         6049 0C 00  0C 003EA         PROBER  #0, #12, (R0)[R9]
                                                18  13 003EF            BEQL    48$
                                          02 A049  9F 003F1            PUSHAB  2(R0)[R9]                                       ; 1813
                                             5A 9E  3C 003F5            MOVZWL  @(SP)+, ITEM_CODE
                                           6049  9F 003F8            PUSHAB  (R0)[R9]                                        ; 1814
                                        08   AE 9E  3C 003FB            MOVZWL  @(SP)+, ITEM_SIZE
                                          04 A049  9F 003FF            PUSHAB  4(R0)[R9]                                       ; 1815
                                        0C   AE 9E  D0 00403            MOVL    @(SP)+, ITEM_ADDR
                                                06  11 00407            BRB     49$                                             ; 1810
                                             5B 0C  D0 00409 48$:       MOVL    #12, STATUS                                     ; 1819
                                           008E  31  0040C            BRW     59$                                             ; 1820
                                             0C 5A  D1 0040F 49$:       CMPL    ITEM_CODE, #12                                  ; 1824
                                                03  15 00412            BLEQ    50$
                                           0083  31  00414            BRW     58$
                                                54  D4 00417 50$:       CLRL    R4                                              ; 1833
                                             0A 5A  D1 00419            CMPL    ITEM_CODE, #10
                                                04  12 0041C            BNEQ    51$
                                                54  D6 0041E            INCL    R4
                                                05  11 00420            BRB     52$
                                             0B 5A  D1 00422 51$:       CMPL    ITEM_CODE, #11                                  ; 1834
                                                68  12 00425            BNEQ    57$
                                             04 08  AE  D1 00427 52$:   CMPL    ITEM_SIZE, #4                                   ; 1837
                                                6D  1F 0042B            BLSSU   58$
                                             50 0C  AE  D0 0042D        MOVL    ITEM_ADDR, R0                                   ; 1845
                                             51 08  AE  D0 00431        MOVL    ITEM_SIZE, R1
                                                53  D4 00435            CLRL    R3
                                    00000000G   00  16 00437            JSB     EXE$PROBEW
                                             C9 50  E9 0043D            BLBC    R0, 48$
                                             7E 03  7D 00440            MOVQ    #3, -(SP)                                       ; 1863
                                                7E  7C 00443            CLRQ    -(SP)
                                                7E  D4 00445            CLRL    -(SP)
                                          03 00000000'  EF  D1 00447    CMPL    CALL_ACMODE, #3
                                                08  12 0044E            BNEQ    53$
                                       00000000'  EF  DD 00450          PUSHL   PARENT_ID
                                                02  11 00456            BRB     54$
                                                7E  D4 00458 53$:       CLRL    -(SP)
                                       00000000'  EF  9F 0045A 54$:     PUSHAB  LOCK_RESNAM
                                                1C  DD 00460            PUSHL   #28
                                             F8 AD  9F 00462            PUSHAB  LOCAL_IOSB
                                             04 54  E9 00465            BLBC    R4, 55$
                                                01  DD 00468            PUSHL   #1
                                                02  11 0046A            BRB     56$
                                                04  DD 0046C 55$:       PUSHL   #4
                                                7E  D4 0046E 56$:       CLRL    -(SP)
                                 00000000G      00  FB 00470            CALLS   #11, SYS$ENQ
                                             5B 50  D0 00477            MOVL    R0, STATUS
                                             20 5B  E9 0047A            BLBC    STATUS, 59$                                     ; 1864
                                             5B F8  AD  3C 0047D        MOVZWL  LOCAL_IOSB, STATUS
                                             19 5B  E9 00481            BLBC    STATUS, 59$                                     ; 1865
08   AE          00      FC  AD                 04  2C 00484            MOVC5   #4, LOCAL_IOSB+4, #0, ITEM_SIZE, @ITEM_ADDR     ; 1874
                                             0C BE      0048B
                                                6B  11 0048D            BRB     65$                                             ; 1833
                                             0C 5A  D1 0048F 57$:       CMPL    ITEM_CODE, #12                                  ; 1877
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                                                 68  12 00492          BNEQ    66$                                                    ;
                                          04     08  AE D1 00494          CMPL    ITEM_SIZE, #4                                          ; 1880
                                                 1C  1E 00498          BGEQU   61$                                                    ;
                                          5B         14  D0 0049A 58$:     MOVL    #20, STATUS                                            ; 1883
                                                 2C  AE 9F 0049D 59$:     PUSHAB  ACP_ATR_LIST                                           ; 1884
                                    04    AE       08  AE D0 004A0          MOVL    8(SP), 4(SP)                                           ;
                                                 04  AE 9F 004A5          PUSHAB  4(SP)                                                  ;
                              00000000G   00         02  FB 004A8          CALLS   #2, LIB$FREE_VM                                        ;
                                                 10  AE B5 004AF 60$:     TSTW    LOCAL_CHANNEL                                          ; 1885
                                                 2F  13 004B2          BEQL    62$                                                    ;
                                                 38  11 004B4          BRB     63$                                                    ; 1886
                                          50     0C  AE D0 004B6 61$:     MOVL    ITEM_ADDR, R0                                          ; 1888
                                          51     08  AE D0 004BA          MOVL    ITEM_SIZE, R1                                          ;
                                                 53  D4 004BE          CLRL    R3                                                     ;
                                    00000000G    00  16 004C0          JSB     EXE$PROBER                                             ;
                                          28         50  E8 004C6          BLBS    R0, 64$                                                ;
                                          5B         0C  D0 004C9          MOVL    #12, STATUS                                            ; 1891
                                                 2C  AE 9F 004CC          PUSHAB  ACP_ATR_LIST                                           ; 1892
                                    04    AE       08  AE D0 004CF          MOVL    8(SP), 4(SP)                                           ;
                                                 04  AE 9F 004D4          PUSHAB  4(SP)                                                  ;
                              00000000G   00         02  FB 004D7          CALLS   #2, LIB$FREE_VM                                        ;
                                                 10  AE B5 004DE          TSTW    LOCAL_CHANNEL                                          ; 1893
                                                 0B  12 004E1          BNEQ    63$                                                    ;
                                          7E     20  AE 3C 004E3 62$:     MOVZWL  IO_CHANNEL, -(SP)                                      ;
                              00000000G   00         01  FB 004E7          CALLS   #1, SYS$DASSGN                                         ;
                                                012D  31 004EE 63$:     BRW     81$                                                    ; 1894
                04          00        0C   BE     08  AE 2C 004F1 64$:     MOVC5   ITEM_SIZE, @ITEM_ADDR, #0, #4, LOCAL_LOCKID            ; 1896
                                                 28  AE    004F8                                                                      ;
                                                 37  11 004FA 65$:     BRB     69$                                                    ; 1877
                                          50     2C BE48  7E 004FC 66$:     MOVAQ   @ACP_ATR_LIST[ACP_ATR_PTR], R0                         ; 1903
                                    02    A0       44 AE4A  F7 00501          CVTLW   ACL_TO_ATR_TAB[ITEM_CODE], 2(R0)                       ;
                                          01         5A  D1 00507          CMPL    ITEM_CODE, #1                                          ; 1904
                                                     0F  13 0050A          BEQL    67$                                                    ;
                                          02         5A  D1 0050C          CMPL    ITEM_CODE, #2                                          ;
                                                     0A  13 0050F          BEQL    67$                                                    ;
                                          03         5A  D1 00511          CMPL    ITEM_CODE, #3                                          ; 1905
                                                     05  13 00514          BEQL    67$                                                    ;
                                          06         5A  D1 00516          CMPL    ITEM_CODE, #6                                          ;
                                                     04  12 00519          BNEQ    68$                                                    ;
                                    14    AE           36  D0 0051B 67$:     MOVL    #54, FUNCTION_CODE                                     ; 1906
                                                 2C BE48  7F 0051F 68$:     PUSHAQ  @ACP_ATR_LIST[ACP_ATR_PTR]                             ; 1907
                                          9E     0C   AE  B0 00523          MOVW    ITEM_SIZE, @(SP)+                                      ;
                                          50     2C BE48  7E 00527          MOVAQ   @ACP_ATR_LIST[ACP_ATR_PTR], R0                         ; 1908
                                    04    A0       0C   AE  D0 0052C          MOVL    ITEM_ADDR, 4(R0)                                       ;
                                                     58  D6 00531          INCL    ACP_ATR_PTR                                            ; 1909
                          02              56             57  F2 00533 69$:     AOBLSS  ITEM_COUNT, J, 70$                             ; 1807
                                                     03  11 00537          BRB     71$                                                    ;
                                                   FEAA  31 00539 70$:     BRW     47$                                                    ;
                                          50     2C BE48  7E 0053C 71$:     MOVAQ   @ACP_ATR_LIST[ACP_ATR_PTR], R0                         ; 1915
                                                 02   A0  B4 00541          CLRW    2(R0)                                                  ;
                                                 2C BE48  7F 00544          PUSHAQ  @ACP_ATR_LIST[ACP_ATR_PTR]                             ; 1916
                                                     9E  B4 00548          CLRW    @(SP)+                                                 ;
                                00C0    CE 00000000'     EF  D0 0054A          MOVL    ACL_CONTEXT, FILE_FIB+48                               ; 1920
                                                     7E  D4 00553          CLRL    -(SP)                                                  ; 1925
                                                 30  AE  DD 00555          PUSHL   ACP_ATR_LIST                                           ;
                                                     7E  7C 00558          CLRQ    -(SP)                                                  ;
                                                     7E  D4 0055A          CLRL    -(SP)                                                  ;
```

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                                00E4  CE  9F 0055C          PUSHAB  FILE_FIB_DESC
                                      7E  7C 00560          CLRQ    -(SP)
                                  F8  AD  9F 00562          PUSHAB  LOCAL_IOSB
                                  38  AE  DD 00565          PUSHL   FUNCTION_CODE
                               7E     48  AE  3C 00568          MOVZWL  IO_CHANNEL, -(SP)
                                      7E  D4 0056C          CLRL    -(SP)
                  00000000G    00         0C  FB 0056E          CALLS   #12, SYS$QIOW
                               5B         50  D0 00575          MOVL    R0, STATUS
                               0C         5B  E9 00578          BLBC    STATUS, 72$                     ;  1926
                               5B     F8  AD  3C 0057B          MOVZWL  LOCAL_IOSB, STATUS
                               05         5B  E9 0057F          BLBC    STATUS, 72$                     ;  1927
                               5B     00C4  CE  D0 00582          MOVL    FILE_FIB+52, STATUS
                                      10  AE  B5 00587 72$:      TSTW    LOCAL_CHANNEL                   ;  1928
                                      0B  12 0058A          BNEQ    73$
                               7E     20  AE  3C 0058C          MOVZWL  IO_CHANNEL, -(SP)
                  00000000G    00         01  FB 00590          CALLS   #1, SYS$DASSGN
                                      2C  AE  9F 00597 73$:      PUSHAB  ACP_ATR_LIST                    ;  1930
                         18   AE     08  AE  D0 0059A          MOVL    8(SP), 24(SP)
                                     18  AE  9F 0059F          PUSHAB  24(SP)
                  00000000G    00         02  FB 005A2          CALLS   #2, LIB$FREE_VM
                               06         5B  E9 005A9          BLBC    STATUS, 74$                     ;  1931
                               03         50  E8 005AC          BLBS    STATUS2, 74$
                               5B         50  D0 005AF          MOVL    STATUS2, STATUS
                                  28  AE  D5 005B2 74$:      TSTL    LOCAL_LOCKID                    ;  1935
                                      33  13 005B5          BEQL    77$
                                      7E  7C 005B7          CLRQ    -(SP)
                                      7E  D4 005B9          CLRL    -(SP)
                                  34  AE  DD 005BB          PUSHL   LOCAL_LOCKID
                  00000000G    00         04  FB 005BE          CALLS   #4, SYS$DEQ
                                      20  11 005C5          BRB     76$
                         30   AE             03  D0 005C7 75$:      MOVL    #3, CMK_ARG_LIST                ;  1943
                         34   AE             57  D0 005CB          MOVL    ITEM_COUNT, CMK_ARG_LIST+4      ;  1944
                         38   AE             59  D0 005CF          MOVL    R9, CMK_ARG_LIST+8              ;  1945
                         3C   AE             5A  9A 005D3          MOVZBL  SHARE, CMK_ARG_LIST+12          ;  1946
                                        30   AE  9F 005D7          PUSHAB  CMK_ARG_LIST                    ;  1948
                              00000000V      EF  9F 005DA          PUSHAB  ACL_DISPATCH
                  00000000G    00         02  FB 005E0          CALLS   #2, SYS$CMKRNL
                               5B         50  D0 005E7 76$:      MOVL    R0, STATUS
                                     10   AE  B5 005EA 77$:      TSTW    LOCAL_CHANNEL                   ;  1953
                                      0B  12 005ED          BNEQ    78$
                               7E     20  AE  3C 005EF          MOVZWL  IO_CHANNEL, -(SP)
                  00000000G    00         01  FB 005F3          CALLS   #1, SYS$DASSGN
                               20     1C  AE  E9 005FA 78$:      BLBC    28(SP), 81$                     ;  1957
                1C   BC        04         00  0D 005FE          PROBEW  #0, #4, @CONTEXT                ;  1958
                                      16  13 00603          BEQL    80$
                               08     18  AE  E9 00605          BLBC    24(SP), 79$                     ;  1961
                            1C BC      0C0  CE  D0 00609          MOVL    FILE_FIB+48, @CONTEXT           ;  1962
                                      0D  11 0060F          BRB     81$
                            1C BC 00000000' EF  D0 00611 79$:      MOVL    ACL_CONTEXT, @CONTEXT           ;  1963
                                      03  11 00619          BRB     81$                             ;  1958
                               5B         0C  D0 0061B 80$:      MOVL    #12, STATUS                     ;  1965
                               50         5B  D0 0061E 81$:      MOVL    STATUS, R0                      ;  1967
                                          04 00621          RET                                     ;  1969

; Routine Size:  1570 bytes,    Routine Base:  $CODE$ + 1318
```

```
;1976      1970  1 %SBTTL  'GET_PARENT_LOCK - get parent for ACL locks'
;1977      1971  1 ROUTINE GET_PARENT_LOCK =
;1978      1972  1
;1979      1973  1 !++
;1980      1974  1 !
;1981      1975  1 ! FUNCTIONAL DESCRIPTION:
;1982      1976  1 !
;1983      1977  1 !       This routine takes out a null lock on the system-wide ACL lock
;1984      1978  1 !       parent name. This lock is used as a parent for user mode ACL locks.
;1985      1979  1 !       It must be taken out in kernel mode, since some ACL locks are
;1986      1980  1 !       taken out in kernel mode.
;1987      1981  1 !       numeric value.  If the name does not exist, an error is returned.
;1988      1982  1 !
;1989      1983  1 ! CALLING SEQUENCE:
;1990      1984  1 !       GET_PARENT_LOCK ()
;1991      1985  1 !
;1992      1986  1 ! INPUT PARAMETERS:
;1993      1987  1 !       none
;1994      1988  1 !
;1995      1989  1 ! IMPLICIT INPUTS:
;1996      1990  1 !       none
;1997      1991  1 !
;1998      1992  1 ! OUTPUT PARAMETERS:
;1999      1993  1 !       none
;2000      1994  1 !
;2001      1995  1 ! IMPLICIT OUTPUTS:
;2002      1996  1 !       PARENT_ID: set to lock ID of parent lock
;2003      1997  1 !
;2004      1998  1 ! ROUTINE VALUE:
;2005      1999  1 !       Status of $ENQ call
;2006      2000  1 !
;2007      2001  1 ! SIDE EFFECTS:
;2008      2002  1 !       none
;2009      2003  1 !
;2010      2004  1 !--
;2011      2005  1
;2012      2006  2 BEGIN
;2013      2007  2
;2014      2008  2 LOCAL
;2015      2009  2         STATUS,                         ! system status return
;2016      2010  2         LOCAL_IOSB      : VECTOR [4, WORD]; ! lock status block
;2017      2011  2
;2018      2012  2
;2019    P 2013  2 STATUS = $ENQ (LKMODE = LCK$K_NLMODE,
;2020    P 2014  2                LKSB   = LOCAL_IOSB,
;2021    P 2015  2                RESNAM = .LOCK_PREFIX[0],
;2022    P 2016  2                FLAGS  = LCK$M_NOQUEUE OR
;2023    P 2017  2                         LCK$M_SYNCSTS OR
;2024    P 2018  2                         LCK$M_SYSTEM,
;2025      2019  2                ACMODE = PSL$C_USER);
;2026      2020  2 IF .STATUS THEN STATUS = .LOCAL_IOSB[0];
;2027      2021  2 IF NOT .STATUS THEN RETURN .STATUS;
;2028      2022  2 PARENT_ID = .(LOCAL_IOSB[2])<0,32>;
;2029      2023  2
;2030      2024  2 1
;2031      2025  1 END;                                    ! End of routine GET_PARENT_LOCK
```

```
                                        0000 00000 GET_PARENT_LOCK:
                                                           .WORD   Save nothing                                    ; 1971
                                5E              08  C2 00002          SUBL2   #8, SP                              ;
                                7E              03  7D 00005          MOVQ    #3, -(SP)                           ; 2019
                                                7E  7C 00008          CLRQ    -(SP)                               ;
                                                7E  7C 0000A          CLRQ    -(SP)                               ;
                                    00000000'   EF  DD 0000C          PUSHL   LOCK_PREFIX                         ;
                                                1C  DD 00012          PUSHL   #28                                 ;
                                          20    AE  9F 00014          PUSHAB  LOCAL_IOSB                          ;
                                                7E  7C 00017          CLRQ    -(SP)                               ;
                    00000000G   00              0B  FB 00019          CALLS   #11, SYS$ENQ                        ;
                                11              50  E9 00020          BLBC    STATUS, 1$                          ; 2020
                                50              6E  3C 00023          MOVZWL  LOCAL_IOSB, STATUS                  ;
                                0B              50  E9 00026          BLBC    STATUS, 1$                          ; 2021
                    00000000'   EF        04    AE  D0 00029          MOVL    LOCAL_IOSB+4, PARENT_ID             ; 2022
                                50              01  D0 00031          MOVL    #1, R0                              ; 2025
                                                    C4 00034 1$:      RET                                         ;

; Routine Size:  53 bytes,    Routine Base:  $CODE$ + 193A
```

```
;  2033     2026  1 %SBTTL  'SET_ID - TPARSE action routine'
;  2034     2027  1 ROUTINE SET_ID =
;  2035     2028  1
;  2036     2029  1 !++
;  2037     2030  1 !
;  2038     2031  1 ! FUNCTIONAL DESCRIPTION:
;  2039     2032  1 !
;  2040     2033  1 !       This routine tries to convert an identifier to its corresponding
;  2041     2034  1 !       numeric value.  If the name does not exist, an error is returned.
;  2042     2035  1 !
;  2043     2036  1 ! CALLING SEQUENCE:
;  2044     2037  1 !       SET_ID ()
;  2045     2038  1 !
;  2046     2039  1 ! INPUT PARAMETERS:
;  2047     2040  1 !       none
;  2048     2041  1 !
;  2049     2042  1 ! IMPLICIT INPUTS:
;  2050     2043  1 !       ACE_BUFFER: address of the binary ACE storage
;  2051     2044  1 !       ACE_INDEX: index into the ACE key area
;  2052     2045  1 !
;  2053     2046  1 ! OUTPUT PARAMETERS:
;  2054     2047  1 !       none
;  2055     2048  1 !
;  2056     2049  1 ! IMPLICIT OUTPUTS:
;  2057     2050  1 !       ACE_INDEX: index into the ACE key area
;  2058     2051  1 !
;  2059     2052  1 ! ROUTINE VALUE:
;  2060     2053  1 !       SS$_NORMAL if the ID name exists
;  2061     2054  1 !       SS$_NOSUCHID if it does not
;  2062     2055  1 !
;  2063     2056  1 ! SIDE EFFECTS:
;  2064     2057  1 !       The identifier name is converted to its corresponding value.  That
;  2065     2058  1 !       value is then placed in the ACE key area.  The index is then updated
;  2066     2059  1 !       to point to the next available key storage area.
;  2067     2060  1 !
;  2068     2061  1 !--
;  2069     2062  1
;  2070     2063  2 BEGIN
;  2071     2064  2
;  2072     2065  2 LOCAL
;  2073     2066  2         UIC_POINTER     : REF $BBLOCK;          ! Pointer to UIC entry
;  2074     2067  2
;  2075     2068  2 ! Save the identifier, and note the type.
;  2076     2069  2
;  2077     2070  2 VECTOR [ACE_BUFFER[ACE$L_KEY], .ACE_INDEX] = .IDENTIFIER;
;  2078     2071  2 ACE_INDEX = .ACE_INDEX + 1;
;  2079     2072  2 IF .IDENTIFIER[UIC$V_FORMAT] EQL UIC$K_UIC_FORMAT
;  2080     2073  2 THEN UIC_COUNT = .UIC_COUNT + 1
;  2081     2074  2 ELSE ID_COUNT = .ID_COUNT + 1;
;  2082     2075  2
;  2083     2076  2 RETURN 1;
;  2084     2077  2
;  2085     2078  1 END;                                           ! End of routine SET_ID
```

```
                                  0004 00000 SET_ID:  .WORD   Save R2                                 ; 2027
                        52 00000000'  EF   9E 00002         MOVAB   ACE_INDEX, R2
                        50            62   D0 00009         MOVL    ACE_INDEX, R0                  ; 2070
                FE08 C240       14    A2   D0 0000C         MOVL    IDENTIFIER, ACE_BUFFER+8[R0]
                                      62   D6 00013         INCL    ACE_INDEX                      ; 2071
                  C0   8F       17    A2   93 00015         BITB    IDENTIFIER+3, #192             ; 2072
                                      05   12 0001A         BNEQ    1$
                                10    A2   D6 0001C         INCL    UIC_COUNT                      ; 2073
                                      03   11 0001F         BRB     2$
                                20    A2   D6 00021 1$:     INCL    ID_COUNT                       ; 2074
                        50            01   D0 00024 2$:     MOVL    #1, R0                         ; 2076
                                           04 00027         RET                                    ; 2078

; Routine Size:  40 bytes,    Routine Base:  $CODE$ + 196F
```

```
;2087     2079  1 %SBTTL  'SET_ACCESS_BIT - TPARSE action routine'
;2088     2080  1 ROUTINE SET_ACCESS_BIT (ARG1, ARG2, ARG3, SIZE, BUFFER) =
;2089     2081  1
;2090     2082  1 !++
;2091     2083  1 !
;2092     2084  1 ! FUNCTIONAL DESCRIPTION:
;2093     2085  1 !
;2094     2086  1 !       This routine checks the current token to determine whether or not
;2095     2087  1 !       it is an access bit name.  If it is, the appropriate bit is set
;2096     2088  1 !       in ACE_RIGHTS.  If it is not, an error is returned.
;2097     2089  1 !
;2098     2090  1 ! CALLING SEQUENCE:
;2099     2091  1 !       SET_ACCESS_BIT (ARG1, ARG2, ARG3, ARG4, ARG5)
;2100     2092  1 !
;2101     2093  1 ! INPUT PARAMETERS:
;2102     2094  1 !       ARG1-ARG3: TPARSE block arguments not used
;2103     2095  1 !       ARG4: size of the current token
;2104     2096  1 !       ARG5: address of the current token text
;2105     2097  1 !
;2106     2098  1 ! IMPLICIT INPUTS:
;2107     2099  1 !       none
;2108     2100  1 !
;2109     2101  1 ! OUTPUT PARAMETERS:
;2110     2102  1 !       none
;2111     2103  1 !
;2112     2104  1 ! IMPLICIT OUTPUTS:
;2113     2105  1 !       ACE_RIGHTS
;2114     2106  1 !
;2115     2107  1 ! ROUTINE VALUE:
;2116     2108  1 !       1 if bit name was defined
;2117     2109  1 !       0 otherwise
;2118     2110  1 !
;2119     2111  1 ! SIDE EFFECTS:
;2120     2112  1 !       The appropriate bit is set in ACE_RIGHTS.
;2121     2113  1 !
;2122     2114  1 !--
;2123     2115  1
;2124     2116  2 BEGIN
;2125     2117  2
;2126     2118  2 LOCAL
;2127     2119  2         BIT_POSITION,                           ! Bit index
;2128     2120  2         BIT_NAME_DESC   : REF $BBLOCK;          ! Bit name descriptor
;2129     2121  2
;2130     2122  2 ! Note that, initially, no match was found.
;2131     2123  2
;2132     2124  2 BIT_POSITION = -1;
;2133     2125  2
;2134     2126  2 ! Now scan the bit name table to see if the specified definition exists.
;2135     2127  2
;2136     2128  2 INCR J FROM 0 TO 31
;2137     2129  2 DO
;2138     2130  3     BEGIN
;2139     2131  3     IF .BIT_NAME_TABLE NEQA 0
;2140     2132  3     THEN
;2141     2133  4         BEGIN
;2142     2134  4         IF PROBER (%REF (0), %REF (DSC$C_S_BLN), BIT_NAME_TABLE[.J, 0, 0, 0, 0])
;2143     2135  4         THEN BIT_NAME_DESC = BIT_NAME_TABLE[.J, 0, 0, 0, 0]
```

```
;  2144          2136  4          ELSE RETURN SS$_ACCVIO;
;  2145          2137  4          IF NOT EXE$PROBER (0, .BIT_NAME_DESC[DSC$W_LENGTH],
;  2146          2138  4                             .BIT_NAME_DESC[DSC$A_POINTER])
;  2147          2139  4          THEN RETURN SS$_ACCVIO;
;  2148          2140  4          END
;  2149          2141  3      ELSE BIT_NAME_DESC = .DEFAULT_BITS[.J];
;  2150          2142  3      IF CH$EQL (.SIZE, .BUFFER,
;  2151          2143  3                 MINU (.SIZE, .BIT_NAME_DESC[DSC$W_LENGTH]), .BIT_NAME_DESC[DSC$A_POINTER], 0)
;  2152          2144  3      THEN
;  2153          2145  4          BEGIN
;  2154          2146  4          IF .BIT_POSITION GEQ 0 THEN RETURN 0;    ! Ambiguous, error.
;  2155          2147  4          BIT_POSITION = .J;
;  2156          2148  3          END;
;  2157          2149  2      END;
;  2158          2150  2
;  2159          2151  2 IF .BIT_POSITION LSS 0 THEN RETURN 0;             ! Specified name not found
;  2160          2152  2 ACE_RIGHTS<.BIT_POSITION,1> = 1;                 ! Note desired access.
;  2161          2153  2
;  2162          2154  2 RETURN 1;
;  2163          2155  2
;  2164          2156  1 END;                                              ! End of routine SET_ACCESS_BIT


                                007C 00000 SET_ACCESS_BIT:
                                           .WORD   Save R2,R3,R4,R5,R6                          ; 2080
                          56         01  CE 00002          MNEGL   #1, BIT_POSITION             ; 2124
                                     54  D4 00005          CLRL    J                            ; 2142
                          50 00000000'  EF  D0 00007 1$:    MOVL    BIT_NAME_TABLE, R0           ; 2131
                                     23  13 0000E          BEQL    3$                           ;
                                   6044  7F 00010          PUSHAQ  (R0)[J]                      ; 2134
                       9E            08  00 0C 00013      PROBER  #0, #8, @(SP)+               ;
                                     16  13 00017          BEQL    2$                           ;
                          55       6044  7E 00019          MOVAQ   (R0)[J], BIT_NAME_DESC       ; 2135
                          50       04    A5 D0 0001D      MOVL    4(BIT_NAME_DESC), R0         ; 2137
                          51             65 3C 00021      MOVZWL  (BIT_NAME_DESC), R1          ;
                                         53 D4 00024      CLRL    R3                           ;
                             00000000G   00 16 00026      JSB     EXE$PROBER                   ;
                          0C             50 E8 0002C      BLBS    R0, 4$                       ;
                          50             0C D0 0002F 2$:  MOVL    #12, R0                      ; 2139
                                         04 00032         RET                                  ;
                          55 00000000'EF44 D0 00033 3$:    MOVL    DEFAULT_BITS[J], BIT_NAME_DESC ; 2141
                          50       10    AC D0 0003B 4$:  MOVL    SIZE, R0                     ; 2143
                50        65       10    00 ED 0003F      CMPZV   #0, #16, (BIT_NAME_DESC), R0  ;
                                         03 1E 00044      BGEQU   5$                           ;
                          50             65 3C 00046      MOVZWL  (BIT_NAME_DESC), R0          ;
                50        00    14 BC    10 AC 2D 00049 5$:  CMPC5   SIZE, @BUFFER, #0, R0, @4(BIT_NAME_DESC) ; 2142
                                   04    B5    00050      ;                                    ;
                                         07 12 00052      BNEQ    6$                           ;
                                         56 D5 00054      TSTL    BIT_POSITION                 ; 2146
                                         17 18 00056      BGEQ    8$                           ;
                          56             54 D0 00058      MOVL    J, BIT_POSITION              ; 2147
                       A8 54             1F F3 0005B 6$:  AOBLEQ  #31, J, 1$                   ; 2128
                                         56 D5 0005F      TSTL    BIT_POSITION                 ; 2151
                                         0C 19 00061      BLSS    8$                           ;
```

```
                00 00000000'  EF              56  E2 00063          BBSS    BIT_POSITION, ACE_RIGHTS, 7$          ; 2152
                              50              01  D0 0006B 7$:      MOVL    #1, R0                                ; 2154
                                                  04 0006E          RET                                           ;
                                              50  D4 0006F 8$:      CLRL    R0                                    ; 2156
                                                  04 00071          RET                                           ;

; Routine Size:  114 bytes,    Routine Base:  $CODE$ + 1997
```

```
;  2166     2157  1 %SBTTL  'GET_UCB_ACL - get UCB ACL queue head address'
;  2167     2158  1 ROUTINE GET_UCB_ACL (CHANNEL) =
;  2168     2159  1
;  2169     2160  1 !++
;  2170     2161  1 !
;  2171     2162  1 ! FUNCTIONAL DESCRIPTION:
;  2172     2163  1 !
;  2173     2164  1 !       This routine locates the ACL queue head for a device, given a
;  2174     2165  1 !       channel number.
;  2175     2166  1 !
;  2176     2167  1 ! CALLING SEQUENCE:
;  2177     2168  1 !       GET_UCB_ACL (ARG1)
;  2178     2169  1 !
;  2179     2170  1 ! INPUT PARAMETERS:
;  2180     2171  1 !       ARG1: channel assigned to the device
;  2181     2172  1 !
;  2182     2173  1 ! IMPLICIT INPUTS:
;  2183     2174  1 !       none
;  2184     2175  1 !
;  2185     2176  1 ! OUTPUT PARAMETERS:
;  2186     2177  1 !       none
;  2187     2178  1 !
;  2188     2179  1 ! IMPLICIT OUTPUTS:
;  2189     2180  1 !       none
;  2190     2181  1 !
;  2191     2182  1 ! ROUTINE VALUE:
;  2192     2183  1 !       SS$_NORMAL if ACLs are allowed
;  2193     2184  1 !       SS$_NOACLSUPPORT if ACLs are not allowed
;  2194     2185  1 !
;  2195     2186  1 ! SIDE EFFECTS:
;  2196     2187  1 !       none
;  2197     2188  1 !
;  2198     2189  1 !--
;  2199     2190  1
;  2200     2191  2 BEGIN
;  2201     2192  2
;  2202     2193  2 MAP
;  2203     2194  2         CHANNEL         : WORD;
;  2204     2195  2
;  2205     2196  2 LOCAL
;  2206     2197  2         STATUS,                                 ! Local routine return status
;  2207     2198  2         DEVICE_UCB      : REF $BBLOCK,          ! Device UCB address
;  2208     2199  2         DEVICE_ORB      : REF $BBLOCK,          ! Device ORB address
;  2209     2200  2         CHANNEL_BLOCK   : REF $BBLOCK;          ! Device CCB address
;  2210     2201  2
;  2211     2202  2 STATUS = IOC$VERIFYCHAN (.CHANNEL; CHANNEL_BLOCK);
;  2212     2203  2 IF NOT .STATUS THEN RETURN .STATUS;
;  2213     2204  2 DEVICE_UCB = .CHANNEL_BLOCK[CCB$L_UCB];
;  2214     2205  2 DEVICE_ORB = .DEVICE_UCB[UCB$L_ORB];
;  2215     2206  2
;  2216     2207  2 ! If no ACLs are allowed, return an error.
;  2217     2208  2
;  2218     2209  2 IF .DEVICE_ORB[ORB$V_NOACL] THEN RETURN SS$_NOACLSUPPORT;
;  2219     2210  2
;  2220     2211  2 ! If the device is unowned, and the protection is all access to everybody,
;  2221     2212  2 !  and there is no ACL present, require SYSPRV to change the ACL.
;  2222     2213  2
```

```
;  2223          2214  2 IF .DEVICE_ORB[ORB$L_OWNER] EQL 0
;  2224          2215  3 AND (IF .DEVICE_ORB[ORB$V_ACL_QUEUE]
;  2225          2216  3       THEN .DEVICE_ORB[ORB$L_ACLFL] EQLA DEVICE_ORB[ORB$L_ACLFL]
;  2226          2217  3       ELSE 1)
;  2227          2218  2 AND NOT .$BBLOCK [CTL$GL_PCB[PCB$Q_PRIV], PRV$V_SYSPRV]
;  2228          2219  2 THEN RETURN SS$_NOPRIV;
;  2229          2220  2
;  2230          2221  2 ! If the ACL queue head is uninitialized, initialize it now.
;  2231          2222  2
;  2232          2223  2 IF NOT .DEVICE_ORB[ORB$V_ACL_QUEUE] THEN ACL_INIT_QUEUE (.DEVICE_ORB);
;  2233          2224  2
;  2234          2225  2 ! Set up the address of the ACL queue head.
;  2235          2226  2
;  2236          2227  2 ACL_QUEUE_HEAD = $BBLOCK [.DEVICE_UCB[UCB$L_ORB], ORB$L_ACLFL];
;  2237          2228  2
;  2238          2229  2 RETURN SS$_NORMAL;
;  2239          2230  2
;  2240          2231  1 END;                                          ! End of routine GET_UCB_ACL


                                        000C 00000 GET_UCB_ACL:
                                                   .WORD   Save R2,R3                          ; 2158
                        50        04    AC  3C 00002          MOVZWL  CHANNEL, R0                 ; 2202
                           00000000G    00  16 00006          JSB     IOC$VERIFYCHAN              ;
                        50              50  E9 0000C          BLBC    STATUS, 5$                  ; 2203
                        52              61  D0 0000F          MOVL    (CHANNEL_BLOCK), DEVICE_UCB ; 2204
                        50        1C    A2  D0 00012          MOVL    28(DEVICE_UCB), DEVICE_ORB  ; 2205
                  06        0B    A0      03  E1 00016          BBC     #3, 11(DEVICE_ORB), 1$      ; 2209
                        50      22BC  8F  3C 0001B          MOVZWL  #8892, R0                   ;                                                  ;
                                          04 00020          RET                                 ;
                                        60  D5 00021 1$:      TSTL    (DEVICE_ORB)                ; 2214
                                        20  12 00023          BNEQ    3$                          ;
                  0A        0B    A0      01  E1 00025          BBC     #1, 11(DEVICE_ORB), 2$      ; 2215
                        51        28  A0  9E 0002A          MOVAB   40(DEVICE_ORB), R1          ; 2216
                        51        28  A0  D1 0002E          CMPL    40(DEVICE_ORB), R1          ;
                                        11  12 00032          BNEQ    3$                          ;
                        51 00000000G    00  D0 00034 2$:      MOVL    CTL$GL_PCB, R1              ; 2218
                  04      0087    C1      04  E0 0003B          BBS     #4, 135(R1), 3$             ;
                        50              24  D0 00041          MOVL    #36, R0                     ; 2219
                                          04 00044          RET                                 ;
                  09        0B    A0      01  E0 00045 3$:      BBS     #1, 11(DEVICE_ORB), 4$      ; 2223
                                        50  DD 0004A          PUSHL   DEVICE_ORB                  ;
                     000000000G    00      01  FB 0004C          CALLS   #1, ACL_INIT_QUEUE          ;
            00000000'  EF        1C  A2      28  C1 00053 4$:      ADDL3   #40, 28(DEVICE_UCB), ACL_QUEUE_HEAD ; 2227
                        50              01  D0 0005C          MOVL    #1, R0                      ; 2229
                                          04 0005F 5$:      RET                                 ; 2231

; Routine Size:  96 bytes,    Routine Base:  $CODE$ + 1A09
```

```
;  2242          2232  1 %SBTTL  'GET_JBC_ACL - get Job Controller queue ACL queue head address'
;  2243          2233  1 ROUTINE GET_JBC_ACL (QUEUE_NAME) =
;  2244          2234  1
;  2245          2235  1 !++
;  2246          2236  1 !
;  2247          2237  1 ! FUNCTIONAL DESCRIPTION:
;  2248          2238  1 !
;  2249          2239  1 !       This routine locates the ACL queue head for a Job Controller
;  2250          2240  1 !       queue.
;  2251          2241  1 !
;  2252          2242  1 ! CALLING SEQUENCE:
;  2253          2243  1 !       GET_JBC_ACL (ARG1)
;  2254          2244  1 !
;  2255          2245  1 ! INPUT PARAMETERS:
;  2256          2246  1 !       ARG1: address of the queue name descriptor
;  2257          2247  1 !
;  2258          2248  1 ! IMPLICIT INPUTS:
;  2259          2249  1 !       none
;  2260          2250  1 !
;  2261          2251  1 ! OUTPUT PARAMETERS:
;  2262          2252  1 !       none
;  2263          2253  1 !
;  2264          2254  1 ! IMPLICIT OUTPUTS:
;  2265          2255  1 !       none
;  2266          2256  1 !
;  2267          2257  1 ! ROUTINE VALUE:
;  2268          2258  1 !       address of the ACL queue head or 0 if an error has occurred
;  2269          2259  1 !
;  2270          2260  1 ! SIDE EFFECTS:
;  2271          2261  1 !       none
;  2272          2262  1 !
;  2273          2263  1 !--
;  2274          2264  1
;  2275          2265  2 BEGIN
;  2276          2266  2
;  2277          2267  2 MAP
;  2278          2268  2         QUEUE_NAME      : REF $BBLOCK;
;  2279          2269  2
;  2280          2270  2 RETURN SS$_BADPARAM;
;  2281          2271  2
;  2282          2272  1 END;                                          ! End of routine GET_JBC_ACL


                                        0000 00000 GET_JBC_ACL:
                                                   .WORD   Save nothing                 ; 2233
                              50           14  D0 00002              MOVL    #20, R0   ; 2270
                                               04 00005              RET               ; 2272

; Routine Size:  6 bytes,    Routine Base:  $CODE$ + 1A69
```

```
;2284        2273  1 %SBTTL  'GET_CEB_ACL - get common event block ACL queue head address'
;2285        2274  1 ROUTINE GET_CEB_ACL (CLUSTER_NAME) =
;2286        2275  1
;2287        2276  1 !++
;2288        2277  1 !
;2289        2278  1 ! FUNCTIONAL DESCRIPTION:
;2290        2279  1 !
;2291        2280  1 !       This routine locates the ACL queue head for a common event block.
;2292        2281  1 !
;2293        2282  1 ! CALLING SEQUENCE:
;2294        2283  1 !       GET_CEB_ACL (ARG1)
;2295        2284  1 !
;2296        2285  1 ! INPUT PARAMETERS:
;2297        2286  1 !       ARG1: address of the cluster name descriptor
;2298        2287  1 !
;2299        2288  1 ! IMPLICIT INPUTS:
;2300        2289  1 !       none
;2301        2290  1 !
;2302        2291  1 ! OUTPUT PARAMETERS:
;2303        2292  1 !       none
;2304        2293  1 !
;2305        2294  1 ! IMPLICIT OUTPUTS:
;2306        2295  1 !       none
;2307        2296  1 !
;2308        2297  1 ! ROUTINE VALUE:
;2309        2298  1 !       address of the ACL queue head or 0 if an error has occurred
;2310        2299  1 !
;2311        2300  1 ! SIDE EFFECTS:
;2312        2301  1 !       none
;2313        2302  1 !
;2314        2303  1 !--
;2315        2304  1
;2316        2305  2 BEGIN
;2317        2306  2
;2318        2307  2 MAP
;2319        2308  2         CLUSTER_NAME    : REF $BBLOCK;
;2320        2309  2
;2321        2310  2 RETURN SS$_BADPARAM;
;2322        2311  2
;2323        2312  1 END;                                          ! End of routine GET_CEB_ACL


                                0000 00000 GET_CEB_ACL:
                                           .WORD   Save nothing                                 ;2274
                          50    14  D0 00002        MOVL    #20, R0                             ;2310
                                    04 00005        RET                                         ;2312

; Routine Size:  6 bytes,    Routine Base:  $CODE$ + 1A6F
```

```
;  2325          2313  1 %SBTTL  'GET_LNT_ACL - get logical name table ACL queue head address'
;  2326          2314  1 ROUTINE GET_LNT_ACL (TABLE_NAME) =
;  2327          2315  1
;  2328          2316  1 !++
;  2329          2317  1 !
;  2330          2318  1 ! FUNCTIONAL DESCRIPTION:
;  2331          2319  1 !
;  2332          2320  1 !       This routine locates the ACL queue head for aLogical name
;  2333          2321  1 !       table.
;  2334          2322  1 !
;  2335          2323  1 ! CALLING SEQUENCE:
;  2336          2324  1 !       GET_LNT_ACL (ARG1)
;  2337          2325  1 !
;  2338          2326  1 ! INPUT PARAMETERS:
;  2339          2327  1 !       ARG1: address of the table name descriptor
;  2340          2328  1 !
;  2341          2329  1 ! IMPLICIT INPUTS:
;  2342          2330  1 !       none
;  2343          2331  1 !
;  2344          2332  1 ! OUTPUT PARAMETERS:
;  2345          2333  1 !       none
;  2346          2334  1 !
;  2347          2335  1 ! IMPLICIT OUTPUTS:
;  2348          2336  1 !       none
;  2349          2337  1 !
;  2350          2338  1 ! ROUTINE VALUE:
;  2351          2339  1 !       address of the ACL queue head or 0 if an error has occurred
;  2352          2340  1 !
;  2353          2341  1 ! SIDE EFFECTS:
;  2354          2342  1 !       none
;  2355          2343  1 !
;  2356          2344  1 !--
;  2357          2345  1
;  2358          2346  2 BEGIN
;  2359          2347  2
;  2360          2348  2 RETURN SS$_BADPARAM;
;  2361          2349  2
;  2362          2350  1 END;                                    ! End of routine GET_LNT_ACL



                                0000 00000 GET_LNT_ACL:
                                           .WORD   Save nothing                    ; 2314
                          50         14  D0 00002          MOVL    #20, R0         ; 2348
                                     04  00005          RET                     ; 2350

; Routine Size:  6 bytes,    Routine Base:  $CODE$ + 1A75
```

```
;  2364          2351  1 %SBTTL  'GET_PCB_ACL - get process ACL queue head address'
;  2365          2352  1 ROUTINE GET_PCB_ACL (PROCESS_NAME) =
;  2366          2353  1
;  2367          2354  1 !++
;  2368          2355  1 !
;  2369          2356  1 ! FUNCTIONAL DESCRIPTION:
;  2370          2357  1 !
;  2371          2358  1 !       This routine locates the ACL queue head for a process.
;  2372          2359  1 !
;  2373          2360  1 ! CALLING SEQUENCE:
;  2374          2361  1 !       GET_PCB_ACL (ARG1)
;  2375          2362  1 !
;  2376          2363  1 ! INPUT PARAMETERS:
;  2377          2364  1 !       ARG1: address of the process name descriptor
;  2378          2365  1 !
;  2379          2366  1 ! IMPLICIT INPUTS:
;  2380          2367  1 !       none
;  2381          2368  1 !
;  2382          2369  1 ! OUTPUT PARAMETERS:
;  2383          2370  1 !       none
;  2384          2371  1 !
;  2385          2372  1 ! IMPLICIT OUTPUTS:
;  2386          2373  1 !       none
;  2387          2374  1 !
;  2388          2375  1 ! ROUTINE VALUE:
;  2389          2376  1 !       address of the ACL queue head or 0 if an error has occurred
;  2390          2377  1 !
;  2391          2378  1 ! SIDE EFFECTS:
;  2392          2379  1 !       none
;  2393          2380  1 !
;  2394          2381  1 !--
;  2395          2382  1
;  2396          2383  2 BEGIN
;  2397          2384  2
;  2398          2385  2 RETURN SS$_BADPARAM;
;  2399          2386  2
;  2400          2387  1 END;                                    ! End of routine GET_PCB_ACL




                                        0000 00000 GET_PCB_ACL:
                                                   .WORD   Save nothing                                    ; 2352
                              50          14   D0 00002          MOVL    #20, R0                          ; 2385
                                           04 00005          RET                                      ; 2387

; Routine Size:  6 bytes,    Routine Base:  $CODE$ + 1A7B
```

```
;  2402          2388  1 %SBTTL 'GET_GBL_ACL - get global section ACL queue head address'
;  2403          2389  1 ROUTINE GET_GBL_ACL (SECTION_NAME) =
;  2404          2390  1
;  2405          2391  1 !++
;  2406          2392  1 !
;  2407          2393  1 ! FUNCTIONAL DESCRIPTION:
;  2408          2394  1 !
;  2409          2395  1 !       This routine locates the ACL queue head for a global section, given
;  2410          2396  1 !       a section name.
;  2411          2397  1 !
;  2412          2398  1 ! CALLING SEQUENCE:
;  2413          2399  1 !       GET_GBL_ACL (ARG1)
;  2414          2400  1 !
;  2415          2401  1 ! INPUT PARAMETERS:
;  2416          2402  1 !       ARG1: address of the section name descriptor
;  2417          2403  1 !
;  2418          2404  1 ! IMPLICIT INPUTS:
;  2419          2405  1 !       none
;  2420          2406  1 !
;  2421          2407  1 ! OUTPUT PARAMETERS:
;  2422          2408  1 !       none
;  2423          2409  1 !
;  2424          2410  1 ! IMPLICIT OUTPUTS:
;  2425          2411  1 !       none
;  2426          2412  1 !
;  2427          2413  1 ! ROUTINE VALUE:
;  2428          2414  1 !       address of the ACL queue head or 0 if an error has occurred
;  2429          2415  1 !
;  2430          2416  1 ! SIDE EFFECTS:
;  2431          2417  1 !       none
;  2432          2418  1 !
;  2433          2419  1 !--
;  2434          2420  1
;  2435          2421  2 BEGIN
;  2436          2422  2
;  2437          2423  2 RETURN SS$_BADPARAM;
;  2438          2424  2
;  2439          2425  1 END;                                    ! End of routine GET_GBL_ACL


                                0000 00000 GET_GBL_ACL:
                                           .WORD   Save nothing                    ; 2389
                          50         14  D0 00002          MOVL    #20, R0         ; 2423
                                     04  00005          RET                     ; 2425

; Routine Size:  6 bytes,    Routine Base:  $CODE$ + 1AB1
```

```
;  2441          2426  1 %SBTTL  'ACL_DISPATCH - main ACL function dispatcher'
;  2442          2427  1 ROUTINE ACL_DISPATCH (ITEM_COUNT, ITEM_LIST, SHARE) =
;  2443          2428  1
;  2444          2429  1 !++
;  2445          2430  1 !
;  2446          2431  1 ! FUNCTIONAL DESCRIPTION:
;  2447          2432  1 !
;  2448          2433  1 !       This routine is called to perform the appropriate ACL operations.
;  2449          2434  1 !       The code is checked for validity and, when necessary, the buffer
;  2450          2435  1 !       is probed for the desired access.
;  2451          2436  1 !
;  2452          2437  1 ! CALLING SEQUENCE:
;  2453          2438  1 !       ACL_DISPATCH (ARG1, ARG2, ARG3)
;  2454          2439  1 !
;  2455          2440  1 ! INPUT PARAMETERS:
;  2456          2441  1 !       ARG1: count of items to process
;  2457          2442  1 !       ARG2: address of the item list
;  2458          2443  1 !       ARG3: 1 if the operation is only reading the ACL
;  2459          2444  1 !             0 if the ACL is being modified
;  2460          2445  1 !
;  2461          2446  1 ! IMPLICIT INPUTS:
;  2462          2447  1 !       ACL_CONTEXT: previous ACL context
;  2463          2448  1 !
;  2464          2449  1 ! OUTPUT PARAMETERS:
;  2465          2450  1 !       NONE
;  2466          2451  1 !
;  2467          2452  1 ! IMPLICIT OUTPUTS:
;  2468          2453  1 !       ACL_CONTEXT: new ACL context
;  2469          2454  1 !
;  2470          2455  1 ! ROUTINE VALUE:
;  2471          2456  1 !       1
;  2472          2457  1 !
;  2473          2458  1 ! SIDE EFFECTS:
;  2474          2459  1 !       The appropriate action routine is called.  Possible ACL modification
;  2475          2460  1 !       may result.
;  2476          2461  1 !
;  2477          2462  1 !--
;  2478          2463  1
;  2479          2464  2 BEGIN
;  2480          2465  2
;  2481          2466  2 MAP
;  2482          2467  2         ITEM_LIST       : REF BLOCKVECTOR [, ITM$S_ITEM, BYTE];
;  2483          2468  2
;  2484          2469  2 ! Cells defined to tie off references made in the module ALLOCB obtained from
;  2485          2470  2 ! the XQP.
;  2486          2471  2
;  2487          2472  2 GLOBAL  LITERAL
;  2488          2473  2         CONTEXT_SAVE    = 0,
;  2489          2474  2         CURRENT_WINDOW  = 0,
;  2490          2475  2         IO_PACKET       = 0;
;  2491          2476  2
;  2492          2477  2 LOCAL
;  2493          2478  2         ACL_STATUS,                             ! Status returned by ACL operation
;  2494          2479  2         STATUS,                                 ! Routine return status
;  2495          2480  2         FUNCTION_CODE,                          ! Operation to perform
;  2496          2481  2         SIZE,                                   ! Size of user buffer
;  2497          2482  2         BUFFER          : REF $BBLOCK,          ! Address of user buffer
```

```
;  2498          2483  2          LOCAL_IOSB      : VECTOR [4, WORD],     ! Lock status block
;  2499          2484  2          LOCAL_LOCKID;                           ! Local copy of the lock-id
;  2500          2485  2
;  2501          2486  2      ! Initialize local storage.
;  2502          2487  2
;  2503          2488  2      CH$FILL (0, 4*2, LOCAL_IOSB);
;  2504          2489  2      LOCAL_IOSB[0] = SS$_NORMAL;                 ! Assume success
;  2505          2490  2      ACL_STATUS = STATUS = SS$_NORMAL;           ! Here also
;  2506          2491  2
;  2507          2492  2      ! Take out the mutex on the specified ACL.
;  2508          2493  2
;  2509          2494  2      IF .SHARE
;  2510          2495  2      THEN SCH$LOCKR (.ACL_QUEUE_HEAD - $BYTEOFFSET (ORB$L_ACLFL) + $BYTEOFFSET (ORB$L_ACL_MUTEX), .CTL$GL_PCB)
;  2511          2496  2      ELSE SCH$LOCKW (.ACL_QUEUE_HEAD - $BYTEOFFSET (ORB$L_ACLFL) + $BYTEOFFSET (ORB$L_ACL_MUTEX), .CTL$GL_PCB);
;  2512          2497  2
;  2513          2498  2      ! Loop over the item list, processing each item.
;  2514          2499  2
;  2515          2500  2      INCR J FROM 0 TO .ITEM_COUNT-1
;  2516          2501  2      DO
;  2517          2502  3          BEGIN
;  2518          2503  3
;  2519          2504  3          FUNCTION_CODE = .ITEM_LIST[.J, ITM$W_ITMCOD];
;  2520          2505  3          SIZE = .ITEM_LIST[.J, ITM$W_BUFSIZ];
;  2521          2506  3          BUFFER = .ITEM_LIST[.J, ITM$L_BUFADR];
;  2522          2507  3
;  2523          2508  3      ! Dispatch on the function code.
;  2524          2509  3
;  2525          2510  3          CASE .FUNCTION_CODE FROM MIN_ACL_ATR TO MAX_ACL_ATR OF
;  2526          2511  3          SET
;  2527          2512  3
;  2528          2513  3              [ACL$C_ADDACLENT]:
;  2529          2514  4                  BEGIN
;  2530          2515  4                  IF .SHARE
;  2531          2516  4                  THEN STATUS = SS$_BADPARAM
;  2532          2517  4                  ELSE IF NOT EXE$PROBER (.CALL_ACMODE, .SIZE, .BUFFER)
;  2533          2518  4                  THEN STATUS = SS$_ACCVIO
;  2534          2519  4                  ELSE IF .ACL_STATUS
;  2535          2520  4                  THEN ACL_STATUS = ACL_ADDENTRY (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER);
;  2536          2521  3                  END;
;  2537          2522  3
;  2538          2523  3              [ACL$C_DELACLENT]:
;  2539          2524  4                  BEGIN
;  2540          2525  4                  IF .SHARE
;  2541          2526  4                  THEN STATUS = SS$_BADPARAM
;  2542          2527  4                  ELSE IF NOT EXE$PROBER (.CALL_ACMODE, .SIZE, .BUFFER)
;  2543          2528  4                  THEN STATUS = SS$_ACCVIO
;  2544          2529  4                  ELSE IF .ACL_STATUS
;  2545          2530  4                  THEN ACL_STATUS = ACL_DELENTRY (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER);
;  2546          2531  3                  END;
;  2547          2532  3
;  2548          2533  3              [ACL$C_MODACLENT]:
;  2549          2534  4                  BEGIN
;  2550          2535  4                  IF .SHARE
;  2551          2536  4                  THEN STATUS = SS$_BADPARAM
;  2552          2537  4                  ELSE IF NOT EXE$PROBER (.CALL_ACMODE, .SIZE, .BUFFER)
;  2553          2538  4                  THEN STATUS = SS$_ACCVIO
;  2554          2539  4                  ELSE IF .ACL_STATUS
```

```
;  2555          2540  4              THEN ACL_STATUS = ACL_MODENTRY (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER);
;  2556          2541  3              END;
;  2557          2542  3
;  2558          2543  3          [ACL$C_FNDACLENT]:
;  2559          2544  4              BEGIN
;  2560          2545  4              IF NOT EXE$PROBEW (.CALL_ACMODE, .SIZE, .BUFFER)
;  2561          2546  4              THEN STATUS = SS$_ACCVIO
;  2562          2547  4              ELSE ACL_STATUS = ACL_FINDENTRY (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER, 0);
;  2563          2548  3              END;
;  2564          2549  3
;  2565          2550  3          [ACL$C_FNDACETYP]:
;  2566          2551  4              BEGIN
;  2567          2552  4              IF NOT EXE$PROBEW (.CALL_ACMODE, .SIZE, .BUFFER)
;  2568          2553  4              THEN STATUS = SS$_ACCVIO
;  2569          2554  4              ELSE ACL_STATUS = ACL_FINDTYPE (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER, 0);
;  2570          2555  3              END;
;  2571          2556  3
;  2572          2557  3          [ACL$C_DELETEACL]:
;  2573          2558  4              BEGIN
;  2574          2559  4              IF .SHARE
;  2575          2560  4              THEN STATUS = SS$_BADPARAM
;  2576          2561  4              ELSE IF .ACL_STATUS
;  2577          2562  4              THEN ACL_STATUS = ACL_DELETEACL (.ACL_QUEUE_HEAD, ACL_CONTEXT);
;  2578          2563  3              END;
;  2579          2564  3
;  2580          2565  3          [ACL$C_READACL]:
;  2581          2566  4              BEGIN
;  2582          2567  4              IF NOT EXE$PROBEW (.CALL_ACMODE, .SIZE, .BUFFER)
;  2583          2568  4              THEN STATUS = SS$_ACCVIO
;  2584          2569  4              ELSE ACL_STATUS = ACL_READACL (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER);
;  2585          2570  3              END;
;  2586          2571  3
;  2587          2572  3          [ACL$C_ACLLENGTH]:
;  2588          2573  4              BEGIN
;  2589          2574  4              IF NOT EXE$PROBEW (.CALL_ACMODE, .SIZE, .BUFFER)
;  2590          2575  4              THEN STATUS = SS$_ACCVIO
;  2591          2576  4              ELSE ACL_STATUS = ACL_ACLLENGTH (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER);
;  2592          2577  3              END;
;  2593          2578  3
;  2594          2579  3          [ACL$C_READACE]:
;  2595          2580  4              BEGIN
;  2596          2581  4              IF NOT EXE$PROBEW (.CALL_ACMODE, .SIZE, .BUFFER)
;  2597          2582  4              THEN STATUS = SS$_ACCVIO
;  2598          2583  4              ELSE ACL_STATUS = ACL_READACE (.ACL_QUEUE_HEAD, ACL_CONTEXT, .SIZE, .BUFFER);
;  2599          2584  3              END;
;  2600          2585  3
;  2601          2586  3
;  2602          2587  3          [ACL$C_RLOCK_ACL,
;  2603          2588  3           ACL$C_WLOCK_ACL]:
;  2604          2589  4              BEGIN
;  2605          2590  4              IF .SIZE LSSU 4
;  2606          2591  4              THEN STATUS = SS$_BADPARAM
;  2607          2592  4              ELSE IF NOT EXE$PROBEW (.CALL_ACMODE, .SIZE, .BUFFER)
;  2608          2593  4              THEN STATUS = SS$_ACCVIO
;  2609          2594  4              ELSE
;  2610          2595  5                  BEGIN
;  2611        P 2596  5                  STATUS = $ENQ (LKMODE = (IF .FUNCTION_CODE EQL ALL$C_RLOCK_ACL
```

```
;  2612        P 2597  5                                        THEN LCK$K_CRMODE ELSE LCK$K_PWMODE),
;  2613        P 2598  5                                LKSB = LOCAL_IOSB,
;  2614        P 2599  5                                RESNAM = LOCK_RESNAM,
;  2615        P 2600  5                                PARID = (IF .CALL_ACMODE EQL PSL$C_USER
;  2616        P 2601  5                                         THEN .PARENT_ID
;  2617        P 2602  5                                         ELSE 0),
;  2618        P 2603  5                                FLAGS = LCK$M_NOQUEUE OR
;  2619        P 2604  5                                        LCK$M_SYNCSTS OR
;  2620        P 2605  5                                        LCK$M_SYSTEM,
;  2621          2606  5                                ACMODE = PSL$C_USER);
;  2622          2607  5                        IF .STATUS THEN STATUS = .LOCAL_IOSB[0];
;  2623          2608  5                        CH$COPY (4, LOCAL_IOSB[2],
;  2624          2609  5                                 0,
;  2625          2610  5                                 .SIZE, .BUFFER);                ! Copy lock-id
;  2626          261   4                        END;
;  2627          2612  3                    END;
;  2628          2613  3
;  2629          2614  3
;  2630          2615  3            [ACL$C_UNLOCK_ACL]:
;  2631          2616  4                BEGIN
;  2632          2617  4                IF .SIZE LSSU 4
;  2633          2618  4                THEN STATUS = SS$_BADPARAM
;  2634          2619  4                ELSE IF NOT EXE$PROBER (.CALL_ACMODE, .SIZE, .BUFFER)
;  2635          2620  4                THEN STATUS = SS$_ACCVIO
;  2636          2621  4                ELSE
;  2637          2622  5                    BEGIN
;  2638          2623  5                    CH$COPY (.SIZE, .BUFFER, 0, 4, LOCAL_LOCKID);
;  2639          2624  5                    STATUS = $DEQ (LKID = .LOCAL_LOCKID);
;  2640          2625  4                    END;
;  2641          2626  3                END;
;  2642          2627  3
;  2643          2628  3            [INRANGE, OUTRANGE]:
;  2644          2629  4                BEGIN
;  2645          2630  4                STATUS = SS$_BADPARAM;
;  2646          2631  3                END;
;  2647          2632  3
;  2648          2633  3            TES;
;  2649          2634  3
;  2650          2635  3            IF NOT .STATUS THEN EXITLOOP;
;  2651          2636  2            END;
;  2652          2637  2
;  2653          2638  2 ! If an error occurred because of an access violation or an access conflict
;  2654          2639  2 ! (trying to modify the ACL when only holding a read lock), return it.  Otherwise
;  2655          2640  2 ! return any error that may have occurred during the ACL processing.
;  2656          2641  2
;  2657          2642  2 IF .STATUS THEN STATUS = .ACL_STATUS;
;  2658          2643  2
;  2659          2644  2 ! Release the ACL mutex.
;  2660          2645  2
;  2661          2646  2 SCH$UNLOCK (.ACL_QUEUE_HEAD - $BYTEOFFSET (ORB$L_ACLFL) + $BYTEOFFSET (ORB$L_ACL_MUTEX), .CTL$GL_PCB);
;  2662          2647  2
;  2663          2648  2 RETURN .STATUS;
;  2664          2649  2
;  2665          2650  1 END;                                    ! End of routine ACL_DISPATCH
```

```
                                CONTEXT_SAVE==      0
                                CURRENT_WINDOW==    0
                                IO_PACKET==         0

                                                0FFC 00000 ACL_DISPATCH:
                                                           .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11          ; 2427
                                             5E      10  C2 00002          SUBL2   #16, SP
                                08           00      6E  2C 00005          MOVC5   #0, (SP), #0, #8, LOCAL_IOSB  ; 2488
                                                 08  AE    0000A
                                   08        AE      01  B0 0000C          MOVW    #1, LOCAL_IOSB                ; 2489
                                             59      01  D0 00010          MOVL    #1, STATUS                    ; 2490
                                             5B      01  D0 00013          MOVL    #1, ACL_STATUS
                                             54 00000000G    00  D0 00016  MOVL    CTL$GL_PCB, R4                ; 2495
                                50 00000000'    EF      24  C3 0001D      SUBL3   #36, ACL_QUEUE_HEAD, R0
                                             6E      0C  AC  D0 00025      MOVL    SHARE, (SP)                   ; 2494
                                             08          6E  E9 00029      BLBC    (SP), 1$
                                                00000000G    00  16 0002C  JSB     SCH$LOCKR                     ; 2495
                                                             06  11 00032  BRB     2$
                                                00000000G    00  16 00034  1$:    JSB     SCH$LOCKW             ; 2496
                                             56              01  CE 0003A  2$:    MNEGL   #1, J                 ; 2504
                                                         0291    31 0003D  BRW     46$
                                51           56              0C  C5 00040  3$:    MULL3   #12, J, R1
                                50           51          08  AC  C1 00044      ADDL3   ITEM_LIST, R1, R0
                                             5A          02  A0  3C 00049      MOVZWL  2(R0), FUNCTION_CODE
                                50           51          08  AC  C1 0004D      ADDL3   ITEM_LIST, R1, R0     ; 2505
                                             57              60  3C 00052      MOVZWL  (R0), SIZE
                                50           51          08  AC  C1 00055      ADDL3   ITEM_LIST, R1, R0     ; 2506
                                             58          04  A0  D0 0005A      MOVL    4(R0), BUFFER
                                   08        01              5A  CF 0005E      CASEL   FUNCTION_CODE, #1, #11 ; 2510
                00BA            0083            004F            001B    00062 4$:    .WORD   6$-4$,-
                0169            013B            011A            00EA    0006A        7$-4$,-
                022F            01C8            01C8            0197    00072        8$-4$,-
                                                                                     13$-4$,-
                                                                                     16$-4$,-
                                                                                     18$-4$,-
                                                                                     23$-4$,-
                                                                                     26$-4$,-
                                                                                     29$-4$,-
                                                                                     32$-4$,-
                                                                                     32$-4$,-
                                                                                     39$-4$
                                                         0219    31 0007A  5$:    BRW     40$                   ; 2630
                                         FA                  6E  E8 0007D  6$:    BLBS    (SP), 5$              ; 2515
                                         50                  58  D0 00080      MOVL    BUFFER, R0            ; 2517
                                         51                  57  D0 00083      MOVL    SIZE, R1
                                         53 00000000'        EF  D0 00086      MOVL    CALL_ACMODE, R3
                                            00000000G        00  16 0008D      JSB     EXE$PROBER
                                         65                  50  E9 00093      BLBC    R0, 9$
                                         65                  5B  E9 00096      BLBC    ACL_STATUS, 10$       ; 2519
                                         7E                  57  7D 00099      MOVQ    SIZE, -(SP)           ; 2520
                                            00000000'        EF  9F 0009C      PUSHAB  ACL_CONTEXT
                                            00000000'        EF  DD 000A2      PUSHL   ACL_QUEUE_HEAD
                                00000000G   00                   04  FB 000A8  CALLS   #4, ACL_ADDENTRY
                                                                 69  11 000AF  BRB     12$
                                         C6                  6E  E8 000B1  7$:    BLBS    (SP), 5$              ; 2525
                                         50                  58  D0 000B4      MOVL    BUFFER, R0            ; 2527
```

```
                    51 57 D0 000B7          MOVL    SIZE, R1                                    ;
                    53 00000000' EF D0 000BA        MOVL    CALL_ACMODE, R3                     ;
                       00000000G 00 16 000C1        JSB     EXE$PROBER                          ;
                    65 50 E9 000C7          BLBC    R0, 14$                                     ;
                    31 5B E9 000CA          BLBC    ACL_STATUS, 10$                             ; 2529
                    7E 57 7D 000CD          MOVQ    SIZE, -(SP)                                 ; 2530
                       00000000' EF 9F 000D0        PUSHAB  ACL_CONTEXT                         ;
                       00000000' EF DD 000D6        PUSHL   ACL_QUEUE_HEAD                      ;
00000000G  00                   04 FB 000DC         CALLS   #4, ACL_DELENTRY                    ;
                                65 11 000E3         BRB     15$                                 ;
                    92 6E E8 000E5 8$:          BLBS    (SP), 5$                                ; 2535
                    50 58 D0 000E8              MOVL    BUFFER, R0                              ; 2537
                    51 57 D0 000EB              MOVL    SIZE, R1                                ;
                    53 00000000' EF D0 000EE    MOVL    CALL_ACMODE, R3                         ;
                       00000000G 00 16 000F5    JSB     EXE$PROBER                              ;
                    61 50 E9 000FB 9$:          BLBC    R0, 17$                                 ;
                    03 5B E8 000FE 10$:         BLBS    ACL_STATUS, 11$                         ; 2539
                          0081 31 00101         BRW     20$                                     ;
                    7E 57 7D 00104 11$:         MOVQ    SIZE, -(SP)                             ; 2540
                       00000000' EF 9F 00107    PUSHAB  ACL_CONTEXT                             ;
                       00000000' EF DD 0010D    PUSHL   ACL_QUEUE_HEAD                          ;
00000000G  00                   04 FB 00113     CALLS   #4, ACL_MODENTRY                        ;
                                7F 11 0011A 12$:        BRB     22$                             ;
                    50 58 D0 0011C 13$:         MOVL    BUFFER, R0                              ; 2545
                    51 57 D0 0011F              MOVL    SIZE, R1                                ;
                    53 00000000' EF D0 00122    MOVL    CALL_ACMODE, R3                         ;
                       00000000G 00 16 00129    JSB     EXE$PROBEW                              ;
                    7E 50 E9 0012F 14$:         BLBC    R0, 24$                                 ;
                       7E D4 00132              CLRL    -(SP)                                   ; 2547
                    7E 57 7D 00134              MOVQ    SIZE, -(SP)                             ;
                       00000000' EF 9F 00137    PUSHAB  ACL_CONTEXT                             ;
                       00000000' EF DD 0013D    PUSHL   ACL_QUEUE_HEAD                          ;
00000000G  00                   05 FB 00143     CALLS   #5, ACL_FINDENTRY                       ;
                                7D 11 0014A 15$:        BRB     25$                             ;
                    50 58 D0 0014C 16$:         MOVL    BUFFER, R0                              ; 2552
                    51 57 D0 0014F              MOVL    SIZE, R1                                ;
                    53 00000000' EF D0 00152    MOVL    CALL_ACMODE, R3                         ;
                       00000000G 00 16 00159    JSB     EXE$PROBEW                              ;
                    7C 50 E9 0015F 17$:         BLBC    R0, 27$                                 ;
                       7E D4 00162              CLRL    -(SP)                                   ; 2554
                    7E 57 7D 00164              MOVQ    SIZE, -(SP)                             ;
                       00000000' EF 9F 00167    PUSHAB  ACL_CONTEXT                             ;
                       00000000' EF DD 0016D    PUSHL   ACL_QUEUE_HEAD                          ;
00000000G  00                   05 FB 00173     CALLS   #5, ACL_FINDTYPE                        ;
                                7B 11 0017A     BRB     28$                                     ;
                    03 6E E9 0017C 18$:         BLBC    (SP), 19$                               ; 2559
                          0114 31 0017F         BRW     40$                                     ;
                    03 5B E8 00182 19$:         BLBS    ACL_STATUS, 21$                         ; 2561
                          0146 31 00185 20$:    BRW     45$                                     ;
                       00000000' EF 9F 00188 21$:       PUSHAB  ACL_CONTEXT                     ; 2562
                       00000000' EF DD 0018E    PUSHL   ACL_QUEUE_HEAD                          ;
00000000G  00                   02 FB 00194     CALLS   #2, ACL_DELETEACL                       ;
                                5A 11 0019B 22$:        BRB     28$                             ;
                    50 58 D0 0019D 23$:         MOVL    BUFFER, R0                              ; 2567
                    51 57 D0 001A0              MOVL    SIZE, R1                                ;
                    53 00000000' EF D0 001A3    MOVL    CALL_ACMODE, R3                         ;
                       00000000G 00 16 001AA    JSB     EXE$PROBEW                              ;
```

```
                                59              50  E9  001B0 24$:     BLBC    R0, 30$                                         ;
                                7E              57  7D  001B3         MOVQ    SIZE, -(SP)                                     ; 2569
                                    00000000'   EF  9F  001B6         PUSHAB  ACL_CONTEXT                                     ;
                                    00000000'   EF  DD  001BC         PUSHL   ACL_QUEUE_HEAD                                  ;
                        00000000G   00              04  FB  001C2         CALLS   #4, ACL_READACL                             ;
                                                    5A  11  001C9 25$:     BRB     31$                                         ;
                                50                  58  D0  001CB 26$:     MOVL    BUFFER, R0                                  ; 2574
                                51                  57  D0  001CE         MOVL    SIZE, R1                                    ;
                                53  00000000'       EF  D0  001D1         MOVL    CALL_ACMODE, R3                             ;
                                    00000000G       00  16  001D8         JSB     EXE$PROBEW                                  ;
                                61                  50  E9  001DE 27$:     BLBC    R0, 33$                                     ;
                                7E                  57  7D  001E1         MOVQ    SIZE, -(SP)                                 ; 2576
                                    00000000'       EF  9F  001E4         PUSHAB  ACL_CONTEXT                                 ;
                                    00000000'       EF  DD  001EA         PUSHL   ACL_QUEUE_HEAD                              ;
                        00000000G   00              04  FB  001F0         CALLS   #4, ACL_ACLLENGTH                           ;
                                                    2C  11  001F7 28$:     BRB     31$                                         ;
                                50                  58  D0  001F9 29$:     MOVL    BUFFER, R0                                  ; 2581
                                51                  57  D0  001FC         MOVL    SIZE, R1                                    ;
                                53  00000000'       EF  D0  001FF         MOVL    CALL_ACMODE, R3                             ;
                                    00000000G       00  16  00206         JSB     EXE$PROBEW                                  ;
                                33                  50  E9  0020C 30$:     BLBC    R0, 33$                                     ;
                                7E                  57  7D  0020F         MOVQ    SIZE, -(SP)                                 ; 2583
                                    00000000'       EF  9F  00212         PUSHAB  ACL_CONTEXT                                 ;
                                    00000000'       EF  DD  00218         PUSHL   ACL_QUEUE_HEAD                              ;
                        00000000G   00              04  FB  0021E         CALLS   #4, ACL_READACE                             ;
                                5B                  50  D0  00225 31$:     MOVL    R0, ACL_STATUS                              ;
                                                    6F  11  00228         BRB     41$                                         ; 2510
                                04                  57  D1  0022A 32$:     CMPL    SIZE, #4                                    ; 2590
                                                    67  1F  0022D         BLSSU   40$                                         ;
                                50                  58  D0  0022F         MOVL    BUFFER, R0                                  ; 2592
                                51                  57  D0  00232         MOVL    SIZE, R1                                    ;
                                53  00000000'       EF  D0  00235         MOVL    CALL_ACMODE, R3                             ;
                                    00000000G       00  16  0023C         JSB     EXE$PROBEW                                  ;
                                6C                  50  E9  00242 33$:     BLBC    R0, 43$                                     ;
                                7E                  03  7D  00245         MOVQ    #3, -(SP)                                   ; 2606
                                                    7E  7C  00248         CLRQ    -(SP)                                       ;
                                                    7E  D4  0024A         CLRL    -(SP)                                       ;
                                03  00000000'       EF  D1  0024C         CMPL    CALL_ACMODE, #3                             ;
                                                    08  12  00253         BNEQ    34$                                         ;
                                    00000000'       EF  DD  00255         PUSHL   PARENT_ID                                   ;
                                                    02  11  0025B         BRB     35$                                         ;
                                                    7E  D4  0025D 34$:     CLRL    -(SP)                                       ;
                                    00000000'       EF  9F  0025F 35$:     PUSHAB  LOCK_RESNAM                                 ;
                                                    1C  DD  00265         PUSHL   #28                                         ;
                                          28        AE  9F  00267         PUSHAB  LOCAL_IOSB                                  ;
                                0A                  5A  D1  0026A         CMPL    FUNCTION_CODE, #10                          ;
                                                    04  12  0026D         BNEQ    36$                                         ;
                                                    01  DD  0026F         PUSHL   #1                                          ;
                                                    02  11  00271         BRB     37$                                         ;
                                                    04  DD  00273 36$:     PUSHL   #4                                          ;
                                                    7E  D4  00275 37$:     CLRL    -(SP)                                       ;
                            00000000G   00              0B  FB  00277         CALLS   #11, SYS$ENQ                                ;
                                59                  50  D0  0027E         MOVL    R0, STATUS                                  ;
                                04                  59  E9  00281         BLBC    STATUS, 38$                                 ; 2607
                                59          08      AE  3C  00284         MOVZWL  LOCAL_IOSB, STATUS                          ;
57              00          0C  AE                  04  2C  00288 38$:     MOVC5   #4, LOCAL_IOSB+4, #0, SIZE, (BUFFER)        ; 2610
                                                    68      0028E                                                               ;
```

```
                                                 3D  11 0028F              BRB     45$                                             ; 2510
                                          04     57  D1 00291 39$:        CMPL    SIZE, #4                                        ; 2617
                                                 05  1E 00294             BGEQU   42$
                                          59     14  D0 00296 40$:        MOVL    #20, STATUS                                     ; 2618
                                                 33  11 00299 41$:        BRB     45$
                                          50     58  D0 0029B 42$:        MOVL    BUFFER, R0                                      ; 2619
                                          51     57  D0 0029E             MOVL    SIZE, R1
                                          53 00000000'  EF  D0 002A1      MOVL    CALL_ACMODE, R3
                                             00000000G  00  16 002A8      JSB     EXE$PROBER
                                          05     50  E8 002AE             BLBS    R0, 44$
                                          59     0C  D0 002B1 43$:        MOVL    #12, STATUS                                     ; 2620
                                                 18  11 002B4             BRB     45$
                04          00    68     57  2C 002B6 44$:        MOVC5   SIZE, (BUFFER), #0, #4, LOCAL_LOCKID                    ; 2623
                                       04  AE     002BB
                                          7E  7C 002BD             CLRQ    -(SP)                                                   ; 2624
                                          7E  D4 002BF             CLRL    -(SP)
                                       10  AE  DD 002C1             PUSHL   LOCAL_LOCKID
                                00000000G 00  04 FB 002C4          CALLS   #4, SYS$DEQ
                                          59  50 D0 002CB          MOVL    R0, STATUS
                                          10  59 E9 002CE 45$:     BLBC    STATUS, 49$                                             ; 2635
                            02            56  04 AC F2 002D1 46$:  AOBLSS  ITEM_COUNT, J, 47$                                     ; 2500
                                                03  11 002D6             BRB     48$
                                             FD65  31 002D8 47$:        BRW     3$
                                          03     59  E9 002DB 48$:     BLBC    STATUS, 49$                                             ; 2642
                                          59     5B  D0 002DE          MOVL    ACL_STATUS, STATUS
                            50 00000000'  EF     24  C3 002E1 49$:     SUBL3   #36, ACL_QUEUE_HEAD, R0                                 ; 2646
                                          54 00000000G  00  D0 002E9   MOVL    CTL$GL_PCB, R4
                                             00000000G  00  16 002F0   JSB     SCH$UNLOCK
                                          50     59  D0 002F6          MOVL    STATUS, R0                                              ; 2648
                                                 04  002F9             RET                                                             ; 2650

; Routine Size:  762 bytes,    Routine Base:  $CODE$ + 1A87
```

```
;  2667          2651  1 %SBTTL  'RUNDOWN_CHANGE_ACL - run down $CHANGE_ACL context'
;  2668          2652  1 GLOBAL ROUTINE RUNDOWN_CHANGE_ACL =
;  2669          2653  1
;  2670          2654  1 !++
;  2671          2655  1 !
;  2672          2656  1 ! FUNCTIONAL DESCRIPTION:
;  2673          2657  1 !
;  2674          2658  1 !       This routine is called to perform the appropriate ACL operations.
;  2675          2659  1 !       The code is checked for validity and, when necessary, the buffer
;  2676          2660  1 !       is probed for the desired access.
;  2677          2661  1 !
;  2678          2662  1 ! CALLING SEQUENCE:
;  2679          2663  1 !       RUNDOWN_CHANGE_ACL ()
;  2680          2664  1 !
;  2681          2665  1 ! INPUT PARAMETERS:
;  2682          2666  1 !       NONE
;  2683          2667  1 !
;  2684          2668  1 ! IMPLICIT INPUTS:
;  2685          2669  1 !       PARENT_ID: lock ID of parent for ACL locks
;  2686          2670  1 !
;  2687          2671  1 ! OUTPUT PARAMETERS:
;  2688          2672  1 !       NONE
;  2689          2673  1 !
;  2690          2674  1 ! IMPLICIT OUTPUTS:
;  2691          2675  1 !       NONE
;  2692          2676  1 !
;  2693          2677  1 ! ROUTINE VALUE:
;  269           2678  1 !       1
;  2695          2679  1 !
;  2696          2680  1 ! SIDE EFFECTS:
;  2697          2681  1 !       All ACL locks taken out by user mode $CHANGE_ACL calls, plus the
;  2698          2682  1 !       parent lock, are dequeued.
;  2699          2683  1 !
;  2700          2684  1 !--
;  2701          2685  1
;  2702          2686  2 BEGIN
;  2703          2687  2
;  2704          2688  2 IF .PARENT_ID NEQ 0
;  2705          2689  2 THEN
;  2706          2690  3     BEGIN
;  2707        P 2691  3     $DEQ (LKID  = .PARENT_ID,
;  2708          2692  3           FLAGS = LCK$M_DEQALL);
;  2709          2693  3     $DEQ (LKID  = .PARENT_ID);
;  2710          2694  3     PARENT_ID = 0;
;  2711          2695  2     END;
;  2712          2696  2
;  2713          2697  2 1
;  2714          2698  1 END;                                    ! End of routine RUNDOWN_CHANGE_ACL



                                  000C 00000         .ENTRY  RUNDOWN_CHANGE_ACL, Save R2,R3          ; 2652
                    53 00000000G  00   9E 00002       MOVAB   SYS$DEQ, R3                             ;
                    52 00000000'  EF   9E 00009       MOVAB   PARENT_ID, R2                           ;
                    50            62   D0 00010       MOVL    PARENT_ID, R0                           ; 2688
```

```
                                    14  13 00013          BEQL    1$                                      ;
                                    01  DD 00015          PUSHL   #1                                      ; 2692
                                    7E  7C 00017          CLRQ    -(SP)                                   ;
                                    50  DD 00019          PUSHL   R0                                      ;
                              63    04  FB 0001B          CALLS   #4, SYS$DEQ                             ;
                                    7E  7C 0001E          CLRQ    -(SP)                                   ; 2693
                                    7E  D4 00020          CLRL    -(SP)                                   ;
                                    62  DD 00022          PUSHL   PARENT_ID                               ;
                              63    04  FB 00024          CALLS   #4, SYS$DEQ                             ;
                                    62  D4 00027          CLRL    PARENT_ID                               ; 2694
                              50    01  D0 00029 1$:       MOVL    #1, R0                                  ; 2698
                                        04 0002C          RET                                             ;

; Routine Size:  45 bytes,    Routine Base:  $CODE$ + 1D81

; 2715          2699  1
; 2716          2700  1 END
; 2717          2701  0 ELUDOM



;                                  PSECT SUMMARY
;
;       Name                    Bytes                           Attributes
;
;  $OWN$                         1171  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $PLIT$                        1396  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  _LIB$KEY0$                      42  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(1)
;  _LIB$STATE$                    664  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(1)
;  _LIB$KEY1$                     213  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(1)
;  $CODE$                        7598  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  .  ABS  .                        0  NOVEC,NOWRT,NORD ,NOEXE,NOSHR,  LCL,  ABS,  CON,NOPIC,ALIGN(0)



;                              Library Statistics
;
;                                        -------- Symbols --------      Pages       Processing
;       File                             Total    Loaded   Percent      Mapped      Time
;
;  _$255$DUA28:[SYSLIB]LIB.L32;1          18619       211         1        1000        00:01.8
;  _$255$DUA28:[SYSLIB]TPAMAC.L32;1          42        28        66          14        00:00.2


; Information:  1
; Warnings:     0
; Errors:       0
```

```
;                                       COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:SYSACLSRV/OBJ=OBJ$:SYSACLSRV MSRC$:SYSACLSRV/UPDATE=(ENH$:SYSACLSRV)

; Size:          7598 code + 3486 data bytes
; Run Time:         03:19.4
; Elapsed Time:     06:02.3
; Lines/CPU Min:      812
; Lexemes/CPU-Min: 37990
; Memory Used:  1462 pages
; Compilation Complete
```

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LNKUMCTRL
LIS

RDBSHR
LIS

SYSACLSRV
LIS

RDBDISP
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FINDHELD
LIS

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LOGIN

DETACHED
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MAP

UTILDEF
REQ

LOGINCMD
CLD

HPWD
LIS

LGIDEF
MDL

AUDIT
LIS

BREAKIN
LIS